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SUGGESTIONS FOR THE SEASON.

Maple Sugar—How to be Made—Requisites for a good Article—Care of Stock—Working Oxen—Cows—Sheep—Oats and Barley—To be Sowed Early—Seeding to Grass—Don't cover Grass Seed Deep—Fences—Not too many—Shade Trees—Fruit Trees—The Garden—It gives us Food and Luxuries 365 days in a year—Make a good Garden.

TIME, in his rapid march, has transferred us from Winter to Spring—the sweetest season in many respects, and where the maple abounds, rendered doubly so by the home manufacture of one of the most delightful sweets in nature.

Maple Sugar.

In addition to our remarks on this subject, at the beginning of last month, we have a few more words to say. The facts, that many trees contain in their sap more or less sugar, that the rock, or sugar maple contains it largely, that some of this variety contain it more abundantly than others, and that the Spring, especially when the air is clear, mild and sunny, and the ground chilled with newly fallen snow, is the time to intercept its flow, and reduce it to a

form to be preserved for use, are known to all.

But whence the sugar comes, and why it abounds in the sap of some trees more than in that of others, are not so clear. We know that the roots are supplied with water from rain and dissolving snow; and that when the snow and rain water enters the spongioles, or extremities of the rootlets, it contains no sugar; but that when drawn from the wood it has become sweet—has sugar dissolved in it, at the rate, in some maples, of a pound to two or three gallons; in others, less, down to a point that renders it hardly worth boiling, while in other species of trees there is hardly enough to be perceptible to the taste.

It is a well ascertained truth that

wood, starch and sugar are essentially the same. Each is composed of carbon, hydrogen and oxygen; and in all three these elements are in very nearly, if not precisely, the same proportions. Hence, by a process well known to the chemist, starch can be converted into sugar, and that without adding anything to it or taking anything from it. The identical matter that *was* starch, *becomes* sugar under his hands. So wood can be changed, first into starch and then into sugar. Nature, by some process, as unknown to the chemist, as his skill is to the rest of mankind, converts into sugar something, within the maple, that was not sugar before. We receive it from her hand, in a solution of two, three, five, or ten gallons of water to one pound of sugar; and what we have to do with it, is to separate the water, which can be done by heating to a temperature of 212° , under the ordinary atmospheric pressure of 15 lbs. to the square inch, or at a lower temperature by removing the atmospheric pressure. The former method—boiling in the open air—is applicable to sugar making on a small scale, while the latter, called *boiling in vacuo*, is resorted to in larger operations, as on a West India sugar plantation.

What we have been saying may appear of no great practical utility. The simple fact which we now bring to view is instructive: It is, that the pearly drops from the sugar maple, if evaporated soon after exuding from the tree, with entire cleanliness, no admixture of foreign substances, no burning on the side of the vessel, the most perfect sugar conceivable will be the result. There is not a

sugar refiner in the world that can equal it. This shows that the sap of the sugar-maple is remarkably pure—a solution of sugar in pure water, and nothing else, except that peculiar flavor which distinguishes it from all other sweets, and according to the taste of most persons, places it before all others. It shows that the process of making maple sugar must be different from that of manufacturing it from cane juice or from the juice of the sorgham. These contain disagreeable acids, to be neutralized by an alkali, as lime or soda. They contain also pulpy matter from the process of grinding. This is to be separated. But the sap of the maple, as it comes from the tree, is free from all these things—is perfectly clean; and the grand secret of making good maple sugar is to keep it clean, by the use of clean tubs, clean kettles, clean every thing about it. The kettle, or boiler, should be broad and shallow. It should be so arranged that the fire will be in contact with the bottom, but not with the sides; and no ashes, sparks or dust of any kind, should be raised, either by admitting the wind, or by the sudden shutting of a door. It is better to boil by a slow than a very high heat, and the sooner it can be boiled after gathering, the better. Sugar from the late runs does not granulate as readily, and is therefore better adapted to the making of molasses.

As bits of wood and particles of dust will find their way into the sap, in spite of the greatest care, the syrup should be strained through two or three thicknesses of cloth, previous to the "sugaring off" process; and as no straining or skimming will take

out the smallest particles, it is well, in the early stages of "sugaring off," to put in skim milk—say a quart to syrup enough to make twenty-five pounds of sugar. The milk will evagulate; the remaining particles will adhere to it; both may be skimmed off together, and you will have a pure, white sugar, good enough for a king, or a republican even, provided the sugaring off be done over a slow, uniform fire, so that no burning of sugar takes place on the sides of the kettle. If you are ambitious of perfect whiteness, you may use bullock's blood instead of milk, and burnt bones to take out all coloring matter. But your sugar will be no better for it; and we do not see why sugar should be absolutely free from all color, any more than wine, beer, butter or cheese should.

If you wish to do it dry enough to mould into cakes, be very cautious towards the last to keep the fire low and uniform, as otherwise you will burn it, giving it a bitter taste and too dark a color.

For family use, and to secure a just proportion of sugar and molasses after draining, it is well to remove from the fire as soon as "it ropes," that is to say, when in dropping from the edge of a skimmer, about three drops will adhere to each other, and fall together, one falling and drawing two or three others along with it, in a sort of uneven rope fashion. When you observe that appearance, take it off and pour it into the vessel from which you mean to draw it.

The children will clean the kettle, if you will let them, unless they have had their spoons in too long before-

hand, or they are not the same sort of children that "used to be."

Stock yet to be Cared For.

Sol is coming. Equal days and nights will greet us on the 21st of this month. When winter was coming, we urged not to let the stock become lean, so much more expensive would it be to winter them, and so much less satisfactory would be the results. But you cannot afford even now to neglect them. See that the working cattle and the horses are fed in a way to be strong to labor. Milch cows should have special care. Light feed for a few hours after calving is safest, as the system is then in a feverish state, and nothing should be given to increase the liability to inflammations; but very soon, ordinarily in less than 24 hours, rich food, as corn, rye and oat meal, with roots, if you have them, and early cut hay, or rowin, are both safe and necessary. For twenty-four hours, at least, the cow with a young calf should be restrained from drinking as much cold water as she might crave. It is safest and better, in the early part of that period, to administer warm water, in which case she may drink as much as is craved. If good and sufficient bedding is afforded and the stall is so constructed as to favor cleanliness, and especially if it is warm, there will be little danger of sore teats and trouble in milking from that cause. After the first day or two, once in the morning and once in the evening is often enough for the calf to suck.

Sheep should have special care at this season. No harm will come from allowing them abroad on pleasant

days, but they should be returned to the fold and properly cared for at night. Look out for the spoon wood (laurel) leaves, if they are in your pasture. Sheep will seldom meddle with them when the ground is bare, but are apt to seize upon them and be poisoned, in case of a sudden fall of snow to cover the ground. A pint of oats, a still smaller quantity of corn, or three or four quarts of turneps, carrots or ruta-bagas for each of your ewes will tell favorably on the greater vigor of the lambs, the better condition of the parent stock, and the increased amount of the wool. If there is any profit in keeping stock it is in keeping it well.

Oats and Barley.

Oats have generally been regarded as an exhausting crop; and we believe it is conceded on nearly all hands, that clover is more likely to take well with barley than with oats. In the economy of the farm, however, oats seem to be necessary. For horses steadily at heavy work corn meal, with cut feed, may be quite as good. For those kept for family use, worked mostly in the carriage or under the saddle, and not steadily at work, oats are better adapted to produce the life and sprightliness desired.

Is not the charge against oats, as exhausting to the soil, ascribable, in part, to the fact that they have generally been grown on poor land, already exhausted by other crops, and without manure? If the land has not produced very well after this, it is hardly to be wondered at. We do not believe, however, that oats are a very profitable crop, nor that they are demanded for feeding purposes to

the extent usually supposed. We believe that four quarts of oats and a half bushel of carrots will do a horse in moderate service more good than eight quarts of oats without the carrots. The cost can be but three-fourths as much; and we are quite confident, that with the mixture of oats and carrots, the horse will require less hay, will be less subject to disease, and will be serviceable to a greater age than on oats alone.

To whatever extent you may decide to grow oats, it is better to select a passably good soil, to manure, if necessary, and to secure a crop of from forty to fifty bushels to the acre. Suppose you desire a hundred bushels in all, may you not better grow them on two acres, or two and a half, than three or four? We have never advocated high cultivation indiscriminately. That it is possible to expend more in the cultivation of an acre than will give the greatest net profit, is freely admitted. But the reverse takes place ten times oftener. We give the land too little, and we get too little from it; and the general rule is that the less we get, the smaller the proportion of what we get, can be estimated as profit.

It cannot be profitable, for instance, to grow twenty-five bushels of oats on an acre of naturally good corn land. To grow seventy-five bushels on the same acre *can* be made profitable—moderately so, at least, unless the land, from its situation, is too high to be put to such a use. The farmer, then, certainly has this choice: either to grow a small crop, with *no* profit, or a large crop, with *some* profit. We do not say this irreverently, nor

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are we unaware that the seasons are under a higher than man's control.— But God has never yet ordered things in this world so that low cultivation has, in a course of seasons, rept as good a profit as higher cultivation, and we do not believe He ever will.

Oats should be sown the first moment that the land is free from frost, and in a fair condition to work. Two, or two and a half bushels of seed to the acre is enough. The same is true of barley. It should be sown early, and we believe that two bushels of seed to the acre, of either oats or barley, is better than three or four: though many, and good farmers, we are aware, believe otherwise.

A Word about Grass Seeding.

Many of the small grass seeds will never find their way out from any considerable depth. In seeding, therefore, with oats, barley, or any thing else, it is better to cover with a bush harrow only, or with a roller. Do not sow with the main crop, on the furrow, and cover to the depth of one, three, and five inches, unless you wish to loose three-fourths of the seed. Grass seed is the cheapest fertilizer you can apply; but then it must sprout, and push its tops into the air, or it cannot essentially benefit the soil.

Implements.

Now is the time to see that the implements are all in order. Alexander once dismissed from his service a soldier who was found burnishing his armour when he should have been using it. Patronize the manufacturer of implements so far as you can do it to your own advantage. If a day's work costs the price of a shovel, and a man in your employ will do as much

in nine days with a new shovel as in ten with an old one that was pretty well worn and rusted out years ago; then, at the end of nine days you will be no looser by having bought a new one. A good plow, at the end of 30 days, may have cost you less than the extra team work employed in drawing the old one. But whatever implements you decide to use, let them be on hand, all in order, and each in its place, before the sun crosses the line on the 21st of this month.

Fences.

Are these all standing, or have some of them been winter-killed?— Watch the hour when the frost is out and make your fields all secure. In planning the year's operations, see if there is not some place on the farm where less fences would answer the purpose. Our fathers were flush with fencing timber. They constructed more fences than were necessary, or even desirable. If we follow their example, now that timber is becoming scarce, we are not as wise as they were. Half a dozen miles of fence on a farm, too old and feeble to stand alone is poor property.

Shade Trees.

Now is the best season to transplant, unless you did it last Autumn, on the ground that you might not find time in the Spring. If transplanted now, trees require less staking than if put out in the fall. Let the holes be large; take up as many small roots as you can; if any of the roots are mangled by the spade, cut them off smoothly with a knife; set the tree no deeper than it stood before; apply water sparingly, if the soil is dry: but otherwise none; diminish

the size of the top, as you of course have curtailed the roots; mulch with coarse hay, straw, swingling tow, chips, saw dust, or any thing that will keep the soil about the roots uniformly moist. Leaves from the woods are a good mulching, provided you will lay over them a little earth to prevent their curling in the sun and being blown away.

Fruit Trees.

Why in the world do not farmers have more of them? Trim out the dead limbs of the old ones, if you have not already done it. Select the places for new ones. Procure the choicest varieties, having regard to situation; and always giving the preference to such as have flourished in your neighborhood, or in like regions; and remember that one tree, well set in ground trenched far around it, and then taken care of, will give you more fruit than ten forced into the ground in a hurry, about as harshly and as unceremoniously as if it was a stake driven down to hold up a fence. Apples, for all seasons; currants, for May and June; gooseberries, for June and July; peaches, from July to October; pears, from August to mid-Winter; with strawberries, raspberries and blackberries in their time, should be the delight of every farm house. We, poor things, in the city, have to pay a big price for these luxuries. You can have them at a comparatively cheap rate; and yet how many farmers, with land enough, are giving themselves and their families scarcely anything in the way of fruit, except the apples of an accidental seedling or two! This is all wrong. They should "turn over a new leaf."

The Garden.

With most of our readers it is yet too early to be putting in seeds. But we call your attention to the importance of a first-rate garden. Let a succession of flowers adorn its borders. But look at the profit of a kitchen garden. It helps to make up 365 breakfasts, and as many dinners every year. Lay your plan now to have a better garden this year than ever before. The location and soil may not be the best, but make them good. If the inclosing fence is not an ornament, as well as a protection, make it such. It can be at least neat, without being very expensive. The soil should be under drained, if at all clayey and wet. If the soil is sandy and the subsoil porous, add to it clay, if within a moderate distance, and plenty of swamp muck, provided that is at hand. There is no great difficulty in changing the character of a soil on a half acre for a farm garden, by such additions as may be required. Simple under draining will make a cold, heavy soil sufficiently light and warm, and the addition of clay will render a light soil permanently more tenacious. Swamp muck will produce a similar effect, only the effect will be less permanent, and will need to be repeated. But every farmer can have a first-rate garden, if he wills it; and what is more, he can have it at no greater outlay than will pay well.

We before said, the garden may be made to help out 365 breakfasts, and as many dinners in a year. But if there are ten in your household, it will help out 3,650 breakfasts and 3,650 dinners—7,300 of both, and one more of each for leap year. And do

you doubt still whether a garden is profitable? Why, reader, it pays in the saving of hard dollars, even if you sell nothing from it, and that is one of the least considerations. It pays in pleasures, as innocent as those of the first pair in Paradise. It pays in the gratification of a just pride in having a beautiful home. It pays in those aspirations to a higher and better life, which nowhere spring

up in the soul more naturally than in a well-kept garden.

If you have a good farm have a garden to match. If you have a poor one, make at least one half acre a fruitful paradise, where you and your family and friends may walk in the cool evenings, and quaff delicious bounties, and think of the Giver, and contemplate, amid his gifts *here*, a *perennial Paradise*.

FARMERS SHOULD WRITE.

The right sort of purpose in a young farmer—Farmers can write on some topics better than any one else—Why should they not?—Short and to the point.

The writer of one of the most sensible articles in our last number says, in a private note, which we venture to make public :

"You are at liberty to publish the above (referring to the article) if you think proper. You will of course have to correct and modify it, for I obtained but a small degree of education, and no practice for writing for publication. I am quite young, and was brought up on a farm, and that with not many privileges for intellectual cultivation. But I aspire to be a good practical farmer, and to be able to put the results of my experience on paper intelligibly."

That is the sort of a young man for us. We like such. You have made but one mistake; and that is nothing strange, for it is one that almost everybody makes. We mean your implied assent to the old error, that the farm is a bad sort of place to be brought up on, while really it is the very best place in the world

and ought to be a great deal the best and will be before many years.

Still it is not wonderful that farmers should be a little reluctant to write. We admit that scholars ought to be able to write better, so far as the graces of style are considered; but short items of farm experience come with the best grace and with a more telling effect, from farmers, and it is of immense value to any man to be able to write respectably well. We advise farmers, as much for their own sakes as ours, to give us an occasional bit of their practice.

The best way of writing is to say what you want to say in the fewest and simplest words, making no effort to be eloquent, but to tell the story, and nothing more. Try it, farmers, and you will succeed better than you expect. Any little errors in language—such are always excusable in business men—we will cheerfully correct. Cultivate the thirst of the young man whose note we have

copied, and you will benefit yourselves by the effort, and your fellow farmers by the perusal.

One farmer has grown a remarkably profitable crop of tobacco—profitable for the grower, not for the consumer—and now he can tell us, better than any other man, how it was done, and how it can be done again; what sort of land, what its previous condition, how manured, how worked, the mode of cultivating and curing the crop, the dangers to this plant, its enemies, how to destroy them, &c. &c.

Another has succeeded remarkably with the more useful crop of Indian corn. Let him state, in a brief, farmer-like way, the character of the soil, its previous use, and the mode of treatment for this crop, dwelling less on unimportant circumstances, and more on those points upon which he believes success depended, and it could hardly fail to be interesting and instructive to other corn growers. So with regard to other crops. We would not encourage a bragging spirit. Above all, do not stretch the truth. If you have grown five hundred bushels of onions on an acre, say five hundred, though others may have grown more. It is not always the largest crop that deserves the most praise. You may have raised eighty bushels of corn to the acre, while your neighbor has raised a hundred; or five hundred bushels of onions, while he has raised eight hundred; or one thousand bushels of carrots, while he has raised twelve hundred, and yet your procedure may be more worthy of imitation than his. If you have grown either of the crops we have supposed, or any other,

in a way to enable you to compensate the labor richly and leave a wide margin for profit, you have done the very thing which all would be glad to know how to do, and you are the very man to tell them how. Any of us would rather be piloted through a dangerous channel by a pilot who had been through before, than by one who had only studied the geography of the coasts.

Another may have reclaimed a filthy marsh and made it a beautiful meadow, at a cost far less than the increased value it gave to his farm. Let him give us the process. We are among those who believe that land improvements often cost twice as much as they should, owing to bad engineering and a want of an intelligent direction of labor. Land with us has been too plenty. We have yet done but little in the way of reclaiming lands naturally unproductive. Hence there is a lack of experience on the subject. Let those who have led off in this line give the country the benefit of what they have learned.

But we are making a long article of what we meant should be a short one, and are thus setting a bad example. We want our farmer readers should give us short articles, true to the letter: each on a subject which he understands better than he does all subjects, and better, perhaps, than any other person understands that one.

Young Farmers Aside.

To young farmers, and young men not yet farmers, but expecting to be, we have something more to say, and that is: learn to write. If you resolve upon it, half the work is done.

The other half can be conquered by a little persevering effort. We want you to learn to compose, not merely well enough for some one to botch up your thoughts, to make them half fit for publication, but so well, and with such confidence in your ability and good taste, that you would hardly suffer an alteration to be made.

Parker's "Aids to English Composition," a work of some four hundred pages, or more, published by the Messrs. Harper, at, we believe, 60 cents only, is a valuable assistant to a young man, who would conquer the difficulties and make himself a good writer. For your encouragement, think of Benjamin Franklin. He possessed good natural abilities, no doubt; but his advantages for improvement, beyond a mere common school education, were just nothing. He was a self-made man. For years, while a journeyman printer, he lunched on a penny biscuit, while his fellow-printer ate a more costly dinner. With the difference of expense he bought a book about once a week, and saved time to read it, while the other printers were at their dinner or carousing at a drinking saloon.

The result was, that Benjamin Franklin, while they sunk in obscurity, rose to eminence. He became one of the most agreeable and useful writers of his age; was honored in republican counsels, and courted in kings' palaces; and when he died it was not to be forgotten, but to be remembered through all time.

Now we do not suppose that so brilliant a career as that of Franklin awaits every young man who will make equally self-denying exertions to qualify himself for usefulness.—

This would be too much to expect; and we would not misrepresent, even for a good object. But depend upon it, intelligence, connected with ability to express one's thoughts well on paper, is as sure to be rewarded as anything. We will not say to you; write for the papers. It may be too soon yet for you to attempt that. But write for your own improvement.—Your judgment will improve with your ability to execute; and when you find that you can express yourself easily and naturally, then you may offer your thoughts for publication—only do not be discouraged if they are not accepted the first time, but try again; and keep trying. You will do better every time; and if you succeed in getting into a respectable journal by the third trial, you will do well.

After saying so much, we will make the following offer: If any young man, among our readers, will send us a short article on some subject suited to our work, written plainly, (on one side of the paper only,) the lines at a good distance from each other, so that it can be interlined for the printer, if necessary, and will give us liberty to alter it as much as we please—for we do not like to meddle with others' thoughts without their permission—we will either publish it as it comes, or will publish it as we choose to alter it, or will write and publish an article of about the same length, under the same caption.

If the writer, when he sends the article, will reserve a copy, with which he may compare the published article, he will have the benefit of our criticism: for if he finds it unaltered,

it will show that we thought it about right; if he finds it much altered, he may conclude that in our judgment there was room for improvement; if it appears to have been rewritten, he need not be discouraged, but try again.

We do not believe the affairs of this world will go quite as they should so long as the ability to speak in public and to write correctly and forcibly is confined to a few. And yet we would not curtail the ability of the few, if we could, though it gives them an immense power, without a sufficient guaranty in all cases, that they will use it well. But it is better to "level up" than to level down.

We would rather be instrumental in stimulating one young man to rise, than in pulling down any who have already risen.

A young man does well to aspire to be a "good practical farmer;" that

alone will give a position of which he need not be ashamed. But if in addition to that, he can be well read, able to write forcibly, and to address an audience acceptably on fitting occasions, he may do much to benefit his calling, and to secure for it its rights.

Men of other professions are generally called to read an address at our agricultural gatherings. Let us give them all praise when they do well.—But we should not be sorry to see the time when the committees in looking for the best man for such an occasion, should find that the best man was the best farmer—and not, as has sometimes happened, the wildest lawyer, or the noisiest politician; and if our suggestions should arouse some young farmer to an effort to make himself able to write and speak as well—at least on his own business—as those can who know nothing about it, we should not be sorry.

FARM IMPLEMENTS AND MACHINES.

Farm implements and machines for farming are all usually included under the popular phrase: farm implements, or farm tools. Now it is not necessary to prove that the accurate use of word and phrases is essential to the writer, the lecturer and the talker. If it be important to apply names to things, then there is little room to doubt the propriety of calling them by their right names.

The word implement, or tool, has been, and is applied to something to be used by the hand: as the hoe, the scythe, the cradle, the rake, the flail, &c. A machine is a work applied to

something more complex, some thing designed to do the work by the application of power—generally horse-power or steam power. For example: the threshing machine is worked by horse-power for separating the grain from the straw and the chaff. The mower and the reaper are machines, the one for cutting grass, and the other for cutting grain. The seed sower, the drill, and the corn-planter are also machines for doing what has hitherto been done by hand. The stump-puller, and the stone-lifter are machines. The plough is an implement, because managed or guided

usually by hand. When so constructed as to do the work without "holding" by hand, as the wheel-plough, or the steam-plough, then it is a machine.

Thus, it is clear to the reader that there is a difference between a machine and a tool, or an implement.—Let this distinction be observed and it will serve to avoid confusion, by making a distinction where there is a difference, as in the case under consideration. The increased call for, and manufacturing of, farm implements and machines, and especially the latter, within the last ten years, has been very great. Not a year passes that does not bring to the farmer's notice some new machine and implements to aid him in doing his farm-work: clearly demonstrating that the mechanic is the right arm of agricultural progress.

If the steam-plough, as many now firmly believe, is destined to turn up and pulverize the soil of the prairie; Wiggins' corn-planter to plant four rows at "a bout"; the improved horse-hoes and cultivators to till the soil during the growing of the crops; and the harvester, husker and sheller to gather and fit it for market;—the mower and horse-rake to cut and gather the hay; the reaper and the threshing machine to gather and prepare the wheat, rye, oats, and barley for the market, then would it seem there will be little left to do after what is done by machinery propelled by horse or steam-power.

No one who remembers the kind of tools or implements used twenty-five years ago and contrasts them with those used last Summer, with the addition of the farm machinery that has

been invented within that time, can fail to be forcibly struck with the progress made in this department. The farmers have hardly kept up in improvements with the mechanics.

That they have not, is hardly to be wondered at, since it is the farmers who pay the money for new inventions, but the mechanics who receive it. We believe there is a readiness on the part of the farmers to appreciate the labors of the mechanic, which is honorable to them; and that mechanics sometimes blame farmers for not purchasing their inventions when there is not just cause. The farmer has two ways to look. First, he must beware of sticking to the old, rusty, worn out, and—at best—clumsily constructed implements and machines of twenty-five years ago, till the extra labor caused by their use costs more than new ones. But, secondly, he must see to it, that the quiet, noiseless enterprise of the manufacturer, backed by the noisier and more blustering spirit of commerce, does not palm off upon him implements yet untried, and that may prove worthless. The farmer, as society is constituted, should be on the best terms with the mechanic, as cheerfully a customer of his in the implement line, as the mechanic is to be the farmer's customer in the purchase of breadstuffs, meats, and dairy products. It is by a just apportionment of these two great producing classes, not only in the same country, but in the same neighborhood. The working farmer and the ingenious and industrious mechanic should, if possible, be so near each other that no middle man may thrust himself between to cheat both.

ROOT CELLARS.

Among the many necessities which a farmer needs about his farm is a root cellar; and to those that have used them they are almost as indispensable as their teams or cows.

It is unnecessary to enter into a discussion on the utility and convenience of a good root cellar, or rather the utility of roots and other succulent fodders which may be kept in the Fall beyond the usual time in a good root house, for their convenience and profit, is beyond a doubt with those who have had experience in the matter.

I will give the mode of building a root cellar by giving a description of one I built. Any one wishing to build can vary it to suit his own convenience. It is attached to the end of my barn, on the overshot side. The bottom of it is about on a level with the bottom of my stables. The size of it is sixteen by twenty feet. The walls are built of stone, laid in lime mortar; wall painted in and outside. No one stone should run through the wall, as it will be more apt to freeze. The height of wall is seven feet, which brings it to the top of barn wall. I have a door entering it from under the overshot of my barn, which makes it always dry and warm. The thickness of wall, twenty inches. To prevent it freezing at the door, I hung two doors on one frame, one swinging in and the other out.

The bottom is plastered with two coats of water lime, which prevents the rats and mice from entering it. It has two coats of common plaster over head. This, with two windows, finishes the cellar.

I then set on it a building the same size of cellar, with twelve feet posts. This I divide in two stories. The first I use to keep my farming tools in, and find it better than money at interest. The second I use for a work shop. This I find, by having a supply of tools and timber—such as every farmer should have—is better to me than double its cost.

M. H. S.

Fairview, Pa.

BEST BUTTER MADE WITHOUT WASHING IN WATER.

This is a mooted point. We are aware that some first-rate dairy women advocate the use of water. They are wrong, nevertheless. If we were a pig, and lived on slops, we would advocate the washing, for we believe the water obtains valuable matters from the butter, but as long as we eat our portion of the butter, we go against the washing, because we believe that the butter loses as much as the water acquires, and that the best part, especially for keeping.

F. A. C. is right. So confident are we of this, that we could almost as soon wash our milk, or cream, or a well-cooked beef steak, in oceans of water, as our butter. Butter that is not washed has a finer aroma, is of nicer taste, and, if properly cleansed of buttermilk, will keep ten times longer than washed butter. The washing of butter is an old practice, commenced without *thought*, and continued without reason.

EDITOR FARMER: In a late number of your paper, I observe an article relative to the superiority of soft over hard water, in working butter.

There is no doubt that, of the two, soft water is preferable ; but my experience proves that butter is much better worked without washing at all, and as many persons may not be able to obtain soft water, the hint may be of service to them.

I have made repeated experiments, and find that butter worked without washing can *more* easily be freed from buttermilk, will be firmer, of much finer flavor, and will *keep better* than that which has been washed. Of course, in order to avoid the necessity of *cooling* butter by washing, the cream must be of the proper temperature when churned. When this is the case, the butter will be firm, and the buttermilk, by gentle but thorough pressure with a ladle, can all be removed without the use of water, and the butter has a peculiar sweetness and flavor, which it does not possess when washed.

Will some of our housewives make the experiment ?

F. A. C.

San Juan Valley, Monterey Co.

WINTER EVENINGS.

Seed time and harvest, summer and winter, succeed each other in rapid succession, as we all can testify. The seed time and harvest of 1858 have come and gone, and left behind them full barns and store-houses, thus confirming the fulfilment of the divine promise to all diligent husbandmen. As there is a seed time in the natural world, so there is, or should be, in the world of mind.

With the farmers, the most favorable time for reading, study, and mental improvement is during the long evenings now succeeding each

other, and furnishing opportunities for storing the mind with useful knowledge. Other things being equal, those farmers who read and study the best books, on subjects pertaining to their calling, will be the most successful. We say, good books, and good papers and magazines ; for let it be borne in mind, that there are good, indifferent, and bad. Devote your leisure to the "former," and let the others "slide." In this way, the prejudice to book farming will soon pass away.

Our earnest advice to all farmers, and more especially the young, is, improve the winter evenings. Each is as good as half a day. They are the seed time of useful knowledge ; and upon their improvement depends almost entirely the result of mental growth and improvement. Knowledge is power, which every reader that improves well his evenings may possess. Do not delay. Begin the work of improvement at once ; and in due time you will have a harvest.

The above, from an esteemed correspondent, is too good to have been crowded out for several months, as it has, but is better late than never. It is the mind that makes the man. Cultivate that. Winter evenings, and rainy days, are the farmer's best seed time.

GOOD AND BAD FARMING.

If there be what our heading indicates, then it is owing to the fact that there are good and bad farmers. Did the earth bring forth spontaneously, in all latitudes and localities, then there would be no occasion to speak of good farming and bad farm-

ing, nor of good farmers and bad farmers, for there would be nothing to do but to gather the spontaneous productions of the earth. But this is not so; for it has been decreed to man, that by the sweat of his face he should eat bread. This implies labor, whose application and direction constitutes the principal difference between good and bad farming. For the same sun shines, the same dews distil, the same showers descend, the same breezes sweep over the plains of the bad farmer that do over the acres of the good. The latter is diligent, methodical, skilful and enterprising, while the former is wanting in all these, and more, for he is a slothful man, whose portrait is so vividly drawn in an old oriental volume well known to our readers.

The good farmer takes care to have plenty of forage, for without forage he can keep no cattle, no horses, no cows. Grass lands, both for hay and pastures, are indispensable; and root crops are also essential to aid in feeding live stock. Besides these, wheat, barley, buckwheat, oats, rye, and corn, must be produced to feed and sustain man.

But, says the bad farmer, wealth is the secret of success with my neighbor, the good farmer. He has inherited money, or else has made it in other business, and can therefore outdo one who has inherited nothing and made nothing but what he has got off from the farm. This may be true in your case, while it may be also with many well-to-do farmers. Remember, it is good farming that pays. Bad never does. So far is it from this, that it not only fails to pay, but impoverishes him who is

engaged in it. No man can afford to raise seven bushels of rye per acre, or ten bushels of wheat, fifteen of oats or barley, twenty of corn, &c., while good farmers produce of wheat and rye each from thirty to sixty bushels per acre, eighty of oats, and seventy-five to one hundred of corn, and two or three hundred of potatoes.

No wonder that bad farming leads ultimately to the abandoning of the business, because it does not pay. True, it does not pay, never did for any length of time, and never will. There are no more independent people in the world than good farmers, and few more miserable, dependent and wretched than bad farmers. It is the purpose of every philanthropic man, and more especially is it so with those who conduct the press, to greatly multiply the latter class by diminishing the former. Then shall good farming be the rule, and bad farming the exception. May the day be hastened, when this shall be verified.

M. M.

NOTES ON DRAINAGE.

Notwithstanding the advantages of thorough drainage are admitted, it is generally replied that farmers cannot afford it while land is so cheap, and there is so much unoccupied, waiting for purchasers at \$1.25 per acre. There is still much discussion as to the depth of draining. Drains four feet deep, and within twenty feet of each other, would be called thorough draining.

In France, the drains must be sunk five feet deep, and thirty feet apart,

by those who take the government money for drainage. In France 86,450 acres have been drained at an average cost of £3 18s. 10d. per acre; in Belgium, 69,160 acres, average cost, £3 3s. 6d. per acre; and in England, 1,365,910 acres, at an average cost of £2 3s. 1d. per acre.

It will be observed that draining costs less in England than either of the other countries mentioned, while much more has been done.

In 1855-6 M. de Thosse cultivated two portions of ground separated from one another only by a ditch.—The one was drained and the other was not. They were sown with wheat after a summer fallow. The crop from the drained part in 1856 was 19:8 bushels per acre; and from the undrained, 6:6 bushels, a difference of 13 bushels, a total difference of value of £5 3s. per acre, more than paying the cost of drainage the first year. Another experiment showed an increase of 16½ per cent. in favor of draining.

The facts on record in this country are not less encouraging than those cited from abroad.

The next great and important step in agricultural improvement is that of thorough and deep underdraining. There are thousands of acres whose products would be nearly doubled by thorough draining. The only objection made, almost, is that of the cost, which is rather imaginary than real; for facts show, that draining pays the cost in the superior yield of the first crop after it has been done, not unfrequently.

We would therefore earnestly invite the attention of farmers to a careful consideration of this subject.

If you have doubts, remove or confirm them by experimenting. This can easily be done,—and when tried we have no doubt of your perseverance until every acre of your tillage land is deeply and thoroughly underdrained. Not only the value of the crops, but the pleasure of working the land will be greatly enhanced. This is the testimony of such as have tried it. It is a good time now to consider the subject, and lay your plans to try an acre the coming season. Surface draining, though better than nothing, is quite insufficient, as experience and observation both abundantly show. Try our advice, and give us the result of your experience for the encouragement of others more skeptical than you are to go and do likewise. L. W.

THE WHEAT INSECT, &c.

NICHOLS, Oct. 13, 1858.

MR. EDITOR :—I regret much that I wrote so blindly in my article of Sept. the 15th as to lead to many errors. You say, "We believe this writer means the Hessian fly." The insect I referred to is the *Cecidomyza Tritica*, or Midge, and very often erroneously called the weavel. This is the insect that is at the present time doing so much injury over a large portion of the Union. It made its appearance in this vicinity in 1847-8, and has remained ever since doing more or less damage annually. The first year I noticed it was, I think, 1848, in a small field of spring wheat that I raised on second flats, or diluvial formation. The wheat was very large and thick; but so much injured that we did not har-

vest it for house use. It yielded only eight or nine bushels per acre, and that very shrunken and deformed shaped grain.

I will give a short description of this insect and its larva as it appeared to me in different years.

The parent fly is a trifle more than one eighth of an inch long, and of the shape and appearance of the common musketo* of this country, but nearly as small again. All the hind part of the body is of a deep orange, and the fore part a shade darker with a black head and dark silvery wings. It is rather a beautiful insect. The parent fly deposits its eggs around the young grain soon after dropping bloom. At that time I have noticed hundreds flying around among the grain, lighting first on one head and then on another, hardly ever remaining more than half a minute still at a time. In a few days the larva can be seen with the naked eye; and when full grown is of a beautiful orange color and the sixteenth of an inch long, and of the thickness of a large sewing thread. I have found hundreds of heads of wheat with from one to eight or ten around each grain. When but one larva is deposited on a grain it seems to do but little injury, often only making a small indentation in the kernel where it lay.

I have found grains wholly shriveled; while others had a large indentation on one side, and a bulging on the other; and others were bent and tortured in every shape.

This insect sometimes deposits its eggs in the heads of rye and oats:

* The musketo referred to here is supposed to be the parent of the wigler found in stagnant water.

very seldom in oats, and with no injury, and nearly the same can be said of rye; but I have seen a number of fields of barley about destroyed by it, and one field that was not harvested. The common yellow bird feeds on the larva of this insect. I saw a number of fields of wheat all picked to peices by the yellow bird in searching after the insect; and perhaps all will remember the story of there being a yellow bird shot two or three years ago, in the vicinity of Binghamton, with one hundred and thirty of the larva in its crop.

In 1844 or 1845 the Hessian fly made its appearance in this vicinity, and I think for the first time; but my old and esteemed friend, Hon. G. H. Barstow, says they appeared fifteen or twenty years before this. The Hessian fly only remained with us three or four years, and then wholly disappeared; and I have not heard of them in this vicinity since. The year they disappeared was the year the C. Tretica, or midge, came. I have only seen the Hessian fly in the flax seed state, and then by thousands, sometimes eight or ten on one stalk of wheat, causing the stalk to fall over. I had one field of wheat wholly ruined by this insect. The variety of spring wheat in my article of the 15th of September, is the Tea wheat. It is a new variety here and very fine.

ROBERT HOWELL.

REMARKS OF MR. LAWTON AT THE FARMERS' CLUB.

QUESTION: THE BEST MODE OF MANAGING SMALL FARMS NEAR LARGE CITIES.

The farmer who may have devoted his life to the cultivation of the soil, following in the footsteps of intelli-

gent progenitors, with satisfactory results, may undervalue science in connection with his business, and to a superficial observer, with some propriety; but the case is precisely similar to the mechanic's art, in which many unlearned men have acquired great proficiency. The scientific farmer avails himself quietly and promptly of all the improvements of the age; the merely practical one walks in the beaten track of his forefathers, and by physical labors produces satisfactory results without a proper knowledge of the cause of this success. The practical and theoretical farmer should be constantly associated, and the mental and physical energies of both thus advance.

Nearly all the results in agricultural labors have their foundation in certain facts and principles connected with chemistry and vegetable physiology, which afford the sure means of advancing agriculture almost to perfection. We would not deny that without a knowledge of principles much has been done, but rather regret that science had not shortened the method and labor. The subject under discussion this day is deeply interesting to a large class of persons who, in their yearnings for a rural life, have their little farms, which must be made productive to enable them to retain their homes in the country while a large portion of their time is passed in the business walks in life of our towns and cities. Let us then take into consideration a proper preparation of the soil for all crops—the adaptation of crops for the nearest market, and our wants, and this brings us to drainage, which, on a bottom of loamy soil, is almost as

indispensable to the health of the farmer as to his success in cultivation. We cannot expect that the whole of even a small farm will be immediately drained by two inch tiles, in the approved method now adopted; where we have stiff clay soils we have generally plenty of stone. In such cases, the best drains can be formed with these stone, by making them five feet deep, and one hundred feet apart, and filling in three feet with stone. The value and necessity of drainage is a fixed fact; and no further experiments are required; all the farmer has to consider is economy, in the method and adaptation to his position, and the profile of his grounds.

Except for line fences or woodland, I would remove division fences upon small farms, and depend upon stall feeding for all my stock; and thus gradually by drainage and subsoiling bring every acre in proper condition for the most profitable crops. The word *adaptation* should be constantly presented to the mind of the agriculturist, taking in view, geographical position, facilities for markets, and their extent for various products of the garden and farm, and it will require but a little reflection to adapt the cultivation of both to the most profitable results.

In this connection may be considered the rural embellishment of the farm by the proper cultivation of valuable fruit trees, and by the grouping and arrangements of trees and shrubbery, so as to produce ample returns of delicious fruit for home consumption and sale, and the luxurious enjoyment of shade and fragrance, without impairing the productiveness to a great extent, of the soil which sustains them.

Much has been said of "worn out lands" and exhausted soils; and when nature has garnered for ages her rich deposits of nitrogen, in connection with all the fertilizing properties with which it is always connected in our soils, we have rudely broken in upon those rich treasure, and wantonly and carelessly used them, by the sale of our crops, so as to prepare this beautiful portion of the globe for a desert, instead of a rich and glorious inheritance for our successors. Are we continuing this system so unbecoming, and in mockery of the intelligence of the age? or are there remedies by change of crops and compensating principles (if I may use the expression) by which changes may be effected to perpetuate for ever the productiveness of all soils for the needful fruits to sustain life?

THE LONG WHITE FRENCH TURNIP.

ED. FARMERS' MAGAZINE:—Enough, I presume, has already been said of this variety of turnip, in other journals. But never having seen it mentioned in yours, I venture to offer a few remarks on the subject, hoping it will be the means of introducing it where it is not already known.

Last Spring, through the kindness of a worthy friend, I received one ounce of the seed, and after distributing to other persons about a quarter of an ounce, I sowed the remainder, and transplanted from the last of July to the middle of August, as the plants came to the right size, on four square rods of light sandy soil. It was an experiment to see what they would amount to by so doing. The plants appeared to stand it as well as cab-

bage plants do generally; and it was quite astonishing to see how thrifty they were.

They continued growing up to November 10, when they were harvested and found to be turnips better in size and quality than any other variety known to me. The yield amounted to eleven bushels, and the turnips were, in my opinion and that of others, the finest flavored yet known. They appear to be good and sweet and free from all woody matter, and keep remarkably well; and as they are better yielders and preferable to others, they will become more generally cultivated through our Western States.

Nothing is more common with a certain class of people than to say they cannot raise turnips. It embodies all the wisdom and is the grand result which most of them have come to after repeated failures of such crops. But these failures are generally owing to poor or unsuitable soils.

This variety of turnips will grow successfully upon almost any kind of soil.

But now to show a better mode of cultivating it for a larger crop.—Black, light loam, well manured with rotten compost, and sowed the middle of July or first of August, will produce turnips of this variety equal to the largest turnips ever known yet.

To prove this assertion more fully, I herewith report that last season I experimented on a small piece of black loam, with more or less rotten compost well mixed together. I sowed the seed, and the plants came up in forty-eight hours after sowing. It was astonishing to see how rapid-

ly they grew; and at the time they were harvested, the turnips were six inches in diameter. But *long*, I think, is not quite so appropriate a name for the variety—for they are not so long as one would expect from the name. With me, it grew five inches, which I cannot consider long. But suffice it to say, that I would not exchange them for any other variety, and would say: try them for once.

W. E. J.

HOW CLOVER IMPROVES LAND.

A Western subscriber says: "Will you, or some of your scientific correspondents, be so good as to explain, on scientific principles, how clover improves land; and also why it excites the salivary glands and causes horses to slobber after it comes into flower? We know that it has both these effects, but how, or why, is not so clear."

The latter query we cannot answer. It is clear that something is developed in the clover plant, more especially at and after flowering time, which stimulates the salivary glands of horses into an unnatural and unhealthy action, as tobacco does those of persons who use it. In the latter case we suspect, but do not know, that the nitrate of potash, (salt-petre,) a compound which all know abounds in tobacco, is the cause. In the clover, we have no doubt, that some compound, perhaps a salt of one of the alkalis—more probably of potash—is developed to a larger extent than a moderate and healthy action of the glands require, and thus produces the slobbering.

We do not claim to have answered

the question, and we leave it open to any one who can.

When the effect is observed, especially if in a horse at work, his feed should be changed.

The other question, we think, is easily answered. Clover has long roots, which penetrate the earth deeply, and draw up its mineral food from a greater depth than most plants. Of course it draws less from the soil contiguous to the surface, because fed largely by that below. It has also a well expanded foliage, and draws, for its organic elements, largely from the air. Now if these mineral elements, drawn from deep in the soil, and the organic elements collected from the air, when both are combined in the full grown plant, be turned under, it is manifest that so much is given to the soil as manure. We cannot, in this case, say given back, or returned to the soil, for it did not come from the soil proper, but from above and below it; and the proper soil has acquired so much of what it had not before, and that in a condition to be readily dissolved and to pass into other plants, as in a succeeding crop of wheat, for instance.

But suppose the clover be cut off or fed off, instead of being turned in.—Still nearly half of its growth is left in the soil: for the roots of a clover crop are found, by investigation, to be nearly as heavy, when gathered and dried, as the tops. But in addition to the large amount of fertilizing matter left in the soil, its being perforated by so many roots and to such a depth, may have something to do with the beneficial effects. May not these perforations favor a natural drainage of the soil by opening pores

for the redundant water of rains to pass freely off and for the air to follow? The drainage and the aeration of soils are of vast importance; and it may be that clover, by its strong, wide spreading and deeply penetrating roots, favors those operations more than the generality of plants. We only mention this, as a possible mode in which clover may improve soils; believing however that the good effects are due mainly to the fact, that the clover acts as a collection of plant food for future crops, gathering from the sub-soil and the air and depositing in the surface soil.

The comparison might not seem too "far fetched," if we should say;—as the steward brings the meat and vegetables into the kitchen, so the clover brings the plant food into the soil proper; and as the cook prepares the food for hungry guests, so the clover prepares the plants food for the wheat or whatever crop is to succeed.

HOW TO DESTROY GOPHERS.

Owing to several dry years and abundance of food, furnished by extensive cultivation of grain and root crops, the gophers, somewhat numerous when American farming was first introduced in California, have now become so destructive from their numbers as to seriously affect the crops in many sections of our state; and it is a matter of concern as to how they can be exterminated. In Alameda county, where they are probably more numerous than in any other section, it is estimated that this little animal destroyed near half a

million dollars' worth of produce of all kinds during the past season. Some remedy against their depredations, and that of an extensive character must be adopted soon, or the farmer may as well abandon the cultivation of his lands. Having formerly resided in a section of the State, and planted a nursery of fruit trees on a piece of land where there were a great many gophers, I set to work with a determination to exterminate them, which I succeeded in doing on about thirty acres in the space of two months; commencing in February, before the breeding season and when they travel a great deal in search of mates. My plan was to go over the entire field once or twice a day, taking a spade with me so as to open their holes where they had recently closed them. After opening the hole down to the main road—as all of the surface holes lead down to one main high-way—I carefully placed in this road some small pieces of beets or carrots, of the latter of which they are very fond, or any other vegetable, in which I had carefully inserted with the point of a knife the smallest particle of strychnine; then I placed a lump of dirt over the hole, being careful not to obstruct the main road with anything but the poisoned pieces of vegetables. The surface hole being stopped so that the light is excluded from the main thoroughfare, the first gopher that comes along will pick up all the pieces and carry them to their rendezvous where sometimes there is a colony of several gophers, old and young. All then eat of the poison, and I have dug as many as seven dead ones from one nest. This mode can only be adopted in

orchards or where the land is cultivated with such crops that you may dig among them without injury ; but where grain is sown, narrow spaces may be left, say six feet wide every one hundred yards in which beets or alfalfa may be planted ; now when the grain has been harvested, these belts of beets or grasses with their green tops will attract the gophers from the dry stubble ; and having scented this favorite food a long distance off, they set to work resolutely driving their tunnels underground until they reach the verdant spot, where they may be caught with great rapidity with the gopher trap, invented and manufactured by Aldrich, of Oakland. Any land that will produce grain will grow beets or alfalfa, which will be of great value as feed for stock in the winter time when the grazing is scant.

W. F.

Sacramento, Jan. 1859.

The K. I. Lady, who gave so graphic a description of Kansas affairs in our last, asks how these enemies to husbandry can be destroyed. Editors of course know a great deal, but on the gopher question we may as well own up ;—we never saw one, never killed one, don't know the best way to do it ; but if strychnine will kill as fast on beets and carrots as it does in adulterated spirits, we pity the gophers, which swallow it. The foregoing from the *California Cultivist*, is a prescription which we have before seen highly recommended for the extermination of the gopher tribe ; and we republish without knowing certainly whether it is a practicable and sure remedy against these vermin or not.

FARMERS' CLUB OF THE AMERICAN INSTITUTE,—FEBRUARY 7.

Not having been present at the above meeting, we quote in part the report of its sayings from Fowler & Wells' *Life Illustrated*.

The President, Robt. L. Pell, Esq., in Chair.

An article from the *Revue Horticole*, read by the Secretary, Judge Meigs, gave an account of a new variety of spinage from New Zealand, of superior quality. Mr. Fuller, of Brooklyn, stated he had it in his garden ; found it excellent, but somewhat difficult of culture.

Shall Seeds be Soaked?—A brief discussion on this question ensued. Soaking seeds, it was agreed, caused them to start sooner. Some seeds with very hard shells must be soaked. The honey locust was instanced, which, unless picked before fully ripe, would not sprout without soaking. Mr. Pell said he preferred to plant seeds usually without soaking.

Baker Apples.—An apple so named, found at Ridgefield, Conn., and vicinity, was presented by Solon Robinson. It resembles in appearance the Baldwin. It is sweet, aromatic, and said to be excellent both for eating and cooking.

Corn in Maine.—The Secretary read from the transactions of the Maine Agricultural Society the report of a crop of corn raised by J. C. Clements, of Kenduskeag. By the use of composts made in a liquid manure tank, he got 125½ bushels of good sound corn to the acre. He approves highly of underdraining and subsoiling.

Cranberries.—A letter from Dr. J. H. Wiles, at Islip, Long Island, 48 miles from Brooklyn, gives his experience

in raising cranberries on upland. He has an acre that are doing finely. One eighth of an acre three years after planting gave a net profit of \$14.50. They are not considered in full bearing till the fifth year. His were purchased plants of the upland variety, but a neighbor took up native vines from near the river and transplanted with good success.

The Loss of Fertility caused by Exporting the products of the Soil.—The President read an able paper showing how much the soil was robbed of its fertilizing powers by the exportation of crops. His tables were complete, and tended to show in the most concise manner the amount of each kind of fertilizer that should be returned to the land for the different kinds of crops taken from it, based on the analysis of the crops themselves. He also gave comparative tables showing how much more rapidly lands would deteriorate when grass or grain crops were cut off than when they were used for pasturage.

Mr. Fuller, of Brooklyn, thought the tables of the President might have a tendency to mislead, as it was well known that a considerable portion of the constituents of a plant came from the air—not through the leaves, as many suppose—but is taken up from the soil by the roots (showing the value of perfect aeration.) Every plant by Nature deposits enough on the ground to replace what it takes from it. Our forest lands grow richer every year from the leaves that fall and decay. The land was without doubt originally poor, and it has been brought up by the annual growth and decay of leaves. He cited lands in Europe which have been brought

up by planting larch trees on them. We do not need the whole crop to keep up fertility; if the straw is properly returned, it will be sufficient. It has been ascertained without doubt that the excrements of each animal contain sufficient fertilizing principle to raise sufficient for the animal's maintenance.

Mr. R. G. Pardee said the practical point of question raised by discussion seemed to be, "how can we best apply the waste parts of crops to the invigorating of the lands?" This decided, and the question of export would be changed, and the result be, the more goods we have to sell, the more waste to raise the next crop with.

Mr. Veeder and Mr. Pike gave their practice in making manures from muck and the free use of water in compost heap.

SPRING WHEAT.

There is every good reason for looking forward to a fair return of spring wheat this year, and a fair price for all that is raised. As a rule in this section about every other year this grain turns out splendidly, and as last year was an utter failure this year would seem to be by rights the "crop year."

There are those who sneer at this way of reasoning as unsound and unscientific, but experience proves that it is a very good practical working rule, not by any means to be despised by the farmer in laying his plans for the future. Moreover, as regards the demand for spring wheat, it is well known that a com-

parative scarcity, of the better varieties, and a consequent augmentation of their price, invariably has a good effect upon the demand for spring wheat, as well as upon the price offered. Now there are several reasons why the supply of first class winter wheat will next year be somewhat short. Not only was there a much smaller space than usual sown, both in this and other states, owing to the hard times, and the discouragement produced by previous failures, but at the present time the fields of wheat are not promising very well, and the prospect for a large yield is but a poor one. In view of all these facts we would urge upon our farmers the probable good policy of putting in a larger amount of spring wheat than usual this coming spring. Put it in carefully, the best of seed, in the most carefully prepared ground.—*Central (Ill.) Gazette*.

A CHALLENGE TO THE WORLD AND THE REST OF MANKIND.

Mark R. Cockrille, publishes the following challenge, which we clip from the *Nashville Union and American*:

I have said that the culture of Fine Wool could be successfully carried to low latitudes, even to the cotton climate, $32\frac{1}{2}^{\circ}$ N., and think that a soft climate will produce a more soft and perfect wool than the far-famed German province, Silesia. This is doubted by many. I therefore propose to select five sheep from my flock, three ewes and two bucks, and show for \$2,000 a side, against any five sheep selected from one flock, ewes

and bucks as above. All the world are requested to compete, making as many entries as they may think proper. The sheep are to be healthy, so as to make a fair comparison; each party entering having a right to select a fair and equitable share of the judges who are to number not less than five. The premium to be awarded to the party who has three sheep out of the five that have the most soft and fine fibre of wool. Entries to be made with the Secretary of the Tennessee State Agricultural Bureau on or before the 20th day of April next, but the exhibition to take place on the second Monday in May, 1860, giving time for importation, &c.—*Wool Grower*.

JACOB SLOW'S FARMING.

We told our readers last month that this man commenced operations for himself ten years ago, in a farm of eighty acres, worth with the stock on it and a few claims against good men, something above \$3000.

What has he done all this time, that while his family has been small and not expensive, has resulted in his barely holding his own, or something less? Before we answer this question, we will name some things which he has not done, the doing of which, though it would have cost him something besides his own labor, would most assuredly have returned his money with profit.

He has made no thorough repair of his buildings. Botching, from time to time, has made them tenantable according to his views. No addition has been made. The barn that would hold the produce of the farm

and accommodate the stock ten years ago answers the same purposes now, for the reason that there has been no increase of either. There was then no barn cellar, no place for storing roots, no water in the yard for his cattle, no embankment on the lower side to prevent the washing away of the liquid manure, no eaves trough to diminish the amount of water that would saturate itself from the manure and then run into a neighboring stream, and there are none of these things now. The buildings made a shabby appearance then and they do still.

He had not changed the location of a single rod of fence on the farm, and has replaced very little old fence with new. The farm ten years ago was cut into almost innumerable small ugly shaped lots. Half a dozen of these might have been thrown into one, at a great saving of fence, with less deformity and equal convenience. But Jacob Slow has not done this. He is averse to changes. How a farm looks is of no sort of consequence with him; and as for hiring labor he does not believe in it.

He has made no garden that deserves the name. There was an ugly patch, with an uglier fence around it, used for that purpose, when he came into possession, and both the garden and fence have held their own remarkably. A few old apple trees, among which are, by accident, two or three seedlings that give fruit of a tolerable quality, an old pear tree or two, and a row of currant bushes, rather the worse for age and neglect, offered him fruit in small quantity and ordinary in quality; and if he

ever inquires what the next generation is to do for fruit, he has yet done nothing to prevent their being without it.

He has underdrained no land, though much of his farm would be all the better for it; has done nothing to promote the growth of timber, although it is evident that for fuel and to keep his multitudinous fences up, he is using it up faster than it grows; has made scarcely an improvement that could be called permanent, or that looks to the future, from the Dan to the Beersheba of his eighty acres.

What, then, has he done? He has grown and expended small crops: a few bushels of corn, a few potatoes, oats enough for his horse and a few to sell, rye enough to bread his family, and little to spare. He has cut grass enough to winter a horse, a yoke of oxen, four or five cows, as many young cattle, and a few sheep.

And what have been his sales?—Various, but prodigiously small.—Of corn, once in a great while—oats, if the season was remarkably good—rye, once in three or four years; now and then a few potatoes; a beef creature rarely; a few calves, sheep and lambs occasionally; a little butter, cheese, and pork, once in a while; some poultry in the fall, and a few eggs in the Spring. These have paid his grocer's and store bills, and *et ceteras* in the way of living very *prudently*.

Jacob Slow has always been industrious; has carried on that farm alone; and to his praise be it said, if it be a matter of praise, he has never paid a dollar for labor, never purchased a shilling's worth of manure, nor expended a penny for saving and increasing that of his own farm.

We do not mean to intimate that there are many Slows among the farmers of this country. But that there are some every one knows. We suppose our readers will—most of them—recognize a few within the circle of their observation—men, whose farming might be described, as, in the case of Jacob, rather by detailing what they have not done, than what they have; whose farms are no better now than ten year ago; who themselves are no more intelligent now than then; who have been industrious, but whose industry has been thrown away.

JAMES FAST'S FARMING.

James Fast was not a fast man in any bad sense of the term. His farm was of about the size of Jacob Slow's and was in all respects similar. The buildings were old, shabby and inconvenient. The fences were many but poor. Much of the land was unproductive, simply because labor had not been employed to bring it into cultivation. He was in debt nearly \$2,000 the day his farm was stocked and well supplied with tools. To pay such a debt from the income of that farm, and to make his home such as a man of spirit and enterprise would be satisfied with, seemed a herculean task; and many were the predictions that he would never own it free from debt. Land will not pay for itself said the fogies. His indebtedness was to a wealthy company, more desirous of good security, than of money. Six per cent. was satisfactory to the company, and the whole principal might have lain till this time if he had chosen. In sur-

veying the premises, he found that in one part four or five paltry little inclosures, some triangular, some crescent formed, all shapes and no shapes, might be thrown into one field of good size and decent outline, if he only had the means to reclaim a few acres of waste land and demolish the hedge rows of briars and bushes between the old lots. In another he found that six patches, averaging but from one to two acres, could be wrought into a beautiful ten acre lot, and that by draining an acre here and removing the boulders from another there, the whole would become arable and sufficiently unique to be cultivated as one field. Here was a dismal looking swamp, which he saw might be converted to a productive meadow; and there a frog pond of an acre or two, surrounded by a sandy bluff, which any man with an eye to the future, would see could easily be made into a cranberry plot, to produce more value for the market than any three of his best acres. A rocky corner at the further end of the farm, producing almost nothing, excepting a plenty of bushes, needed but to be fenced against the cattle to grow a good crop of wood and timber the next fifteen or twenty years. The portion of the farm, which had been reserved for wood was covered with valuable timber, which might be disposed of to great advantage, provided the wood could be grown on that remote, rocky, and for other purposes, almost useless land. The fruit trees were few and old, and now was the time to have an orchard growing. The house, the barn, the wood house, the sheds and other buildings needed expensive repairs.

Never did a man feel the need of money more than James Fast at this time. What improvements could be made if he only had it. Should he pay the interest on his debt, and be contented to let the principal lie, and so use what he could make from the farm in improving it? Or should he scrub away upon the farm pretty much as it was, and pay over all he could get to diminish the debt and bring down the interest.

He chose a middle course, resolved that he would attempt each year to pay the interest and to make a small payment on the principal. But to go to work on that farm as it was, to see every day crooked fences where there should be straight ones, to go round swamp holes, that should be yielding rich grass crops, to see every thing on the whole farm just about as it should not be, and to think that long years must pass before a particle of his pride could be gratified, or his young wife see anything in her home to be proud of, or that could be reckoned as tidy and comfortable, was not a little trying to his feelings.

But James Fast thought if two men should work on a farm, where but one had worked before, something "would turn up" or be turned up, by the end of the year, and that there would be a satisfaction in witnessing improvements, though not as rapid as he could desire. On the last day of March, with a hired man engaged for eight months he commenced. The first thing done, after looking about the homestead, putting the buildings in a little better condition, cleaning out the door yard, and straightening up the front fence, was

to fence off that further end, designed for a wood lot. The next was to put up a summer's stock of wood. At the same time he managed to keep the team, a yoke of oxen and a horse at work, carrying a few logs to the mill to be sawed. At each return from the mill, his team brought back a few slabs and rough boards, a part of which would do to construct a pig pen, another part to repair fences with, and the refuse to make a summer's stock of oven wood. One reason for carrying these logs to the mill at this time was, that when his team should be going to take something to the village during the summer, the boards might furnish loading back. He thought it well enough to kill two birds with the one stone when it can be done as well as not. The next thing done was to set out trees, a few for shade and others carefully selected for fruit. The shade trees he located, not as he would have done with reference to the old house, but as would fit the new one, not yet built, nor to be built, he feared very soon, but already existing, and making a pretty good appearance in his mind, the shades appearing as an important, though not an expensive portion of the future homestead.

By the end of May, the garden had been enlarged from an eighth to a half of an acre; and a cheap, but straight and passably neat fence had been placed around it. Two fields in one case and three in another, had been thrown into one, and the intervening hedges were cleared up; the manure had been applied, the barn-yard thrown into a better shape for preserving manure, and a consid

erable quantity of composting matter had been drawn into it for enlarging the next year's supply. But we should trespass on the reader's patience, were we to go through a history of ten year's doings on that place.

Every farmer knows that great changes cannot be effected on a farm of eighty acres even, in a single season. But James Fast began a series of improvements, which became important and valuable, at the end of ten years. He had work the first year, to pay his man and pay the interest on his debt and \$50 of the principal. But by a small surplus of the ordinary crops, the sale of a few cords of wood, a little timber, and the et ceteras, which a prudent calculating man will continue to spare, he made it out. But he now says he was a fool for paying anything on the principal, that fifty dollars if invested at that time in improvements on his land would have given him more than six per cent., every year from that time to this, and therefore he would have been a gainer, by letting the debt alone, and investing the money on his land. He now looks over his farm, and says such a farm as this, with its improved stock, its comfortable buildings, its larger fields, its fewer but better fences to keep standing, every acre producing, will pay debts more easily than such a farm as this was ten years ago.

James Fast does not believe that it is the first duty of a farmer to be out of debt, but to use as much capital on his farm as he can make yield above the common per cent. His opinion is that if a farmer is worth but

the value of his land, stock and implements, he ought to be in debt, because what he owns, (land, stock and implements,) is *fixed capital*, and that with this he needs a working capital, equal to from a quarter to a half of the fixed capital. Whether he is right in this, others must judge. One thing is certain;—he has practiced on this principle, since three or four of the first years, and is now sorry that he did not so practice from the very first, and nobody will deny that he is a successful farmer, and that he has grown more and more so from the beginning.

He has not succeeded by penuriousness nor by oppression; not by unfair dealing, or unreasonable exactions. Every man who has labored for him has ever been satisfied, and he has cheerfully borne his proportion of the public burdens. He has not labored with unreasonable severity, has not denied himself, nor his man, an occasional holiday and whoever has visited him in his new house, can testify that there is manifested in that home much of that elevation of mind which every lover of his country would wish to see common. His success seems to have been the result of plans well laid, and persistently carried out, not of a slavish devotion to mammon; and when we see a farmer thus fair, liberal and yet thriving, clearly solvent and worth from one to six or eight thousand dollars above the point of bare solvency, which he has gained mostly by his own efforts, and that in a most useful calling; we regard him as a *Living Industry*, and we consider him as the richest man in the world, except others who are just like him—as

much richer than the covetous millionaire who has more than enough, and would cheat you out of your eyes, if he could, to get more, as can be computed.

Whatever others may think, and we know the world is apt to entertain an unaccountable respect for a man with a big pile, though with nothing else to commend him, we would much sooner do off, or, as they say for brevity, doff the beaver to such a sample of *living industry* in a useful employment, than to the richest banker that, in furnishing money to the industrious has let a million or two stick to his own fingers, and is not contented with that, but keeps grabbing for more. One is the biggest man going and the other the littlest.

HINTS ON MAKING MAPLE SUGAR.

In addition to our own hints on this subject, we give these of the *Wool Grower*, which have since come to our notice. If in some points there is a difference, the reader can choose either or—neither. In most respects the *Wool Grower's* views coincide with ours, the one being confirmatory of the other.

Last year several essays were received in response to our call for experience on this important topic, which were published on pages 5 and 37 of Vol. 17. Other lengthy communications, for which we had not room, were received from A. Brown, Somerset Co., Pa.; S. R. Griggs, Fayston(?); L. F. A., Andover, Me.; J. K. M. Canterbury, N. H., H. H. Doolittle, Ontario Co., N. Y., etc. We embody here the principal suggestions contained in these letters.

The time for tapping of course varies with the locality and the character of the season. In many places in ordinary seasons, a large amount of sugar is made during February. The business should commence as soon as the sap will flow.

Where but few trees are attended to, the ordinary fixtures and utensils used for household purposes will be sufficient; but where sugar making is a part of the business of the farm, the grove or "sap bush," numbering from a hundred to a thousand of trees, special, and in some cases extensive, preparations are necessary.

For tapping, a three-fourth inch bit is generally preferred. The holes should be one and half to two inches deep, entering only the sap wood, and inclining slightly upwards, to prevent the sap remaining and souring in the orifice. "Boxing" or chipping is condemned, as injurious to the tree, and the gash being exposed to the light and air, the wood soon dries, so as to require additional cutting or "freshening."

Wooden tubes, or quill elder, sumach, or pine, as may be most convenient, are preferable to tin or sheet iron. They should be fitted closely into the opening. Pails or tubs of cedar or pine, the inside unpainted, with a board cover to exclude leaves and dust, are the best vessels for receiving the sap from the tree. They may be hooped with wood, and made quite cheaply. It is well to have the top of larger diameter than the bottom, so that ice may be easily removed, in case the sap should freeze in them.—An auger hole or notch cut in the edge of the cover admits the sap into the pail.

When the trees are quite near each other, labor may be saved by using leading troughs, running from tree to tree, and finally emptying into a receiving tub. Or a line of troughs from near the centre of the bush to the tub, may be made, into which the collecting vessels are emptied. There is more wasted in this manner from leaking, spilling, and evaporation, than in the common method of hauling the sap to the boiling place in a capacious covered tub, mounted on a sled.

Sheet iron pans, (Russia iron is best,) five or six inches deep, set in mason work, so that the bottom is exposed to the heat, will evaporate the sap much more rapidly than can be done in the old fashioned arch kettle.

A brick wall built across the middle of the fire chamber, to within two inches of the bottom of the pan, will throw the heat against the bottom of the pan, and save much fuel. Some of the most successful sugar makers say it is of the greatest importance in sugar-making, that the sap be reduced to syrup in the shortest possible time after being collected. Although the sap may not sour in several days, its properties are undoubtedly affected by light and air, and the amount of crystallizable matter considerably diminished, so that even if the "run" be light for a few days, it is best to reduce to syrup every eight or twelve hours. This precaution is even more necessary in the latter part of the season, when the sap crystallizes with more difficulty. By judicious boiling, the available run may be prolonged several days.

To "sugar off," the syrup should be strained through a thick woolen cloth

into a medium sized kettle, and reduced slowly, carefully guarding against burning, as this would greatly injure the color and quality of the sugar. It is sufficiently done when threads of the thick syrup break off short like glass, after cooling quickly in water or on snow. Then remove it from the fire, stir it continually, and when it begins to "grain," immediately turn it into the moulds. Grained sugar is prepared in the same manner, only that the stirring is continued until the mass is dry.

We have said nothing of clarifying, for experience has proved that if proper care be taken to keep every article used in the various processes *scrupulously clean*, and to prevent leaves, insects, etc., from falling into the sap, no clarifying agents are needed. We have eaten maple sugar of the finest quality both as to flavor and color, made entirely without clarifying.

The best form for city retail market, is in small cakes, weighing from two to four ounces, as they are more convenient for peddling out.

AGRICULTURAL TALK IN MAINE.

The talk of the Maine farmers at Augusta, every winter, are easy and genial, intelligent and instructive. The *Augusta Age* reports them, too, in good style. At a recent meeting of the Board of Agriculture the novel plan was adopted of calling upon members alphabetically to state their views. Accordingly, Mr. Anderson, of Cumberland, began. He suggested that the State should furnish to the farmers, through the Agricultural Societies, the facts and principles best adapted to farming.

Mr. Bailey, of Sagadahoc, gave an account of high farming in New Jersey. He insisted that Maine soil was as good as any in the United States, and would grow as good crops.

Mr. Dill, of Franklin, presented several varieties of corn. Some of the seed was obtained from Canada East, and was planted in Phillips the 17th of May. It dropped from the husk the 17th of August, and during the month was entirely ripe. This must be a very valuable variety.

Mr. Cushman, of Aroostook, said grass was the Maine crop. But they were too apt to grow it of an inferior quantity and quality. He said we have the requisites for a great, intelligent farming people. We should ask little of the State, but much of every man in the State.

A gentlemen had said that grass would grow without seeding, and for this heresy he had to catch it. Mr. Hammett, of Penobscot, was glad to hear the gentleman who made the remark say he was no farmer. The fact was evident. Grass will not grow well anywhere without seeding and enriching. He did not think such a question need be discussed. He said the true way of setting grass lands is to scatter a little manure on the top, and that is the only way to make a sure catch. He had found that five pounds of seed with a little top dressing was better than twenty pounds without. He did not sow clear seed now. He mixed it with chaff and old manure.

Mr. Dill, of Franklin, communicates statistics which, he said, gave an average statement of the exports of Franklin county. 75,000 sheep, 200,000 pounds of wool, worth \$70,000;

50,000 lambs, 20,000 sheep and lambs slaughtered, the skins of which are worth \$15,000.—We do not, he said, kill sheep enough. If Franklin county killed 10,000 more, it would be more profitable. The skins and tallow would be worth as much as the live sheep are, and the flesh would be left to eat at home. Mr. Dill made up the agricultural marketable produce of his county at \$528,000.

Mr. Flint of Somerset, said Somerset county received \$150,000 per annum for sheep sold, without detriment to the flocks. What Mr. Dill had stated was startling, yet Franklin county was now half forest. The Dead River country was capable of producing as much as the whole country does now. The same of Somerset county. That whole section is a most inviting field for farmers, far in advance of the West. There was no better land in the world.

Mr. Rice, of Oxford, said that some years ago he went over that country. From that time to the present he had no doubt that if any young man, about starting for California or the west, with \$400 or \$500, would go in there, and suffer the same privations, he would do far better.

COOKED FOOD FOR FATTENING CATTLE.

Mr. Samuel H. Clay, of Kentucky, has been experimenting in feeding several lots of hogs, changing them from raw to cooked and from cooked to raw food, ground and unground. The *Valley Farmer* furnishes the following results:

Mr. Clay's experiments show, that to make pork on dry corn, one bushel gave, in one instance, a gain of five

pounds and ten ounces. In changing the food, on the same animals, to boiled corn, one bushel produced a gain of fourteen pounds and seven ounces; and a bushel of corn ground and cooked, gave a gain of sixteen pounds and seven ounces; while in another instance, after a change from dry corn to cooked meal, the gain upon one bushel was but a fraction short of eighteen pounds.

COB MEAL FOR FOWLS.

MESSRS. EDITORS:—I was somewhat interested in a communication to a late number of the *Ploughman*, by Mr. Holbrook, of Wrentham, and not a little surprised to learn that he had made the discovery, that "cob meal is destructive to dung hill fowls. If this be true, it is of much importance to all who have fowls to feed.

But I should think that he had overlooked an important consideration in arriving at the above conclusion. It appears that Mr. H. ordered the cob meal which had been frozen up in his hog trough, to be thrown to his fowls, and that several of them were soon found with their crops much swollen, and filled with the said meal, all of which died except the one relieved by his surgical operation.

Now, to me, it appears very reasonable to suppose that cob meal, or any other meal given to fowls in a semi-frozen condition, if eaten in any considerable quantity, would chill the crop and produce inaction, so as to prevent the discharge therefrom.

If Mr. H. had warmed the contents of his trough, before giving them to his fowls, I think he would have been spared the loss of his hens, and that

the discovery that "cob meal is destructive to dung hill fowls" would not yet have been made.

I have had some experience in raising fowls, having had for several years past from forty to fifty old fowls, and frequently from fifty to one hundred and fifty chickens. In the winter season, when they can get no food from the ground, I feed them mostly upon cob meal, I always give it to them warm, and do not see but they thrive as well, and are as plump, healthy, and contented, as when fed upon corn or any other grain.

Though I consider cob meal a perfectly safe and wholesale food for fowls, yet a change of food is undoubtedly better for them than confinement to one kind. Some meal should be given them, especially in the winter season, but I have lost several fine fowls by feeding them too plentifully with scraps mixed with their dough. Yet I think there is no danger if a plenty of grain, or other food, unmixed with the scraps, be kept by them, so that they need not be compelled to eat the scraps to satisfy their hunger.

Rockville, Mass. E. A. JONES, Jr.

Cor. Mass. *Ploughman*.

GOOD WINTER BUTTER.

A premium was awarded to Daniel Parker, of Watertown, at a late meeting of the Jefferson County (N. Y.) Agricultural Society for the best Winter-made butter.

It may be instructive to know Mr. Parker's process. The following embraces whatever there is in it that is peculiar:

As soon as he has finished milking, the pails of milk are set into kettles

of boiling water, where they are allowed to remain thirty minutes; then the milk is strained into pans and allowed to stand until the cream is ready to be taken off, which will depend upon the temperature of the room in which it is set.

Before churning, the cream must be kept in a warm room at least twelve hours; then it will require churning less than an hour. He washes his butter immediately after taking it out of the churn, and at the same time salts it. His cows had been fed on clover hay, without grain or roots, for six weeks previous to the time of making this sample.

Butter made in this way is perfectly sweet, of good color, and will bring from two to four cents per pound more in the market, than that manufactured in the ordinary way.

Now we say again, as we have already said once in this number, that the washing is entitled to no part of the credit. Mr. Parker's butter was good in spite of the washing, and not in consequence of it. Butter, fresh from the churn, does not need washing. If made clean as it should be, it requires no washing to cleanse it, and if not made clean, its impurities are the very last thing that would wash out. If too warm, it may much better be cooled in a draft of pure air, than in water, which is certain to cleanse it of no impurities, but to wash away some portion at least, of what the butter requires to give it a luscious flavor and its best keeping qualities.

Science, common sense and the bulk of testimony from practice are in favor of non-washing. We say therefore that Mr. Parker's butter was good in spite of washing. The prin-


cipal objection to washing is, that the butter will not keep as well. If the society had required their specimens to be kept six or twelve months before awarding the premium, the decision would have gone in favor of unwashed butter.

Let a few societies offer premiums for the best butter one year old, and it will put a stop to the washing process. What society will offer the following premium?—"For the best sample of butter one year old, not less than 100 pounds, its age to be satisfactorily certified, and the process of manufacture and mode of preservation to be stated particularly, \$100.

If \$100 dollars is too much, say \$50; and if that is too much say \$25. — we would say \$100. That amount would draw out important truth, and do more good than \$1,000 for the fastest nag. It would put a stop to washing butter.

There is from eighty-seven to dangerously near ninety-nine per cent. of water in milk as it comes from the cow; and though not as much in cream, there is enough, without help from the well.

Wash the pails, tubs, and churn as much as you please; soak the churn in warm water before putting in the cream, if necessary, to bring the temperature to 60° or a little less; but don't wash the butter; *it will not be as well flavored, nor will it keep so long.*

 Elihu Baldwin, of East Whately, Ms., raised, during the past season, 2,900 lbs. of tobacco from one acre of land. Paoli Lathrop, of South Hadley, Ms., raised 6,700 lbs. from three acres, which he sold for \$1,150.



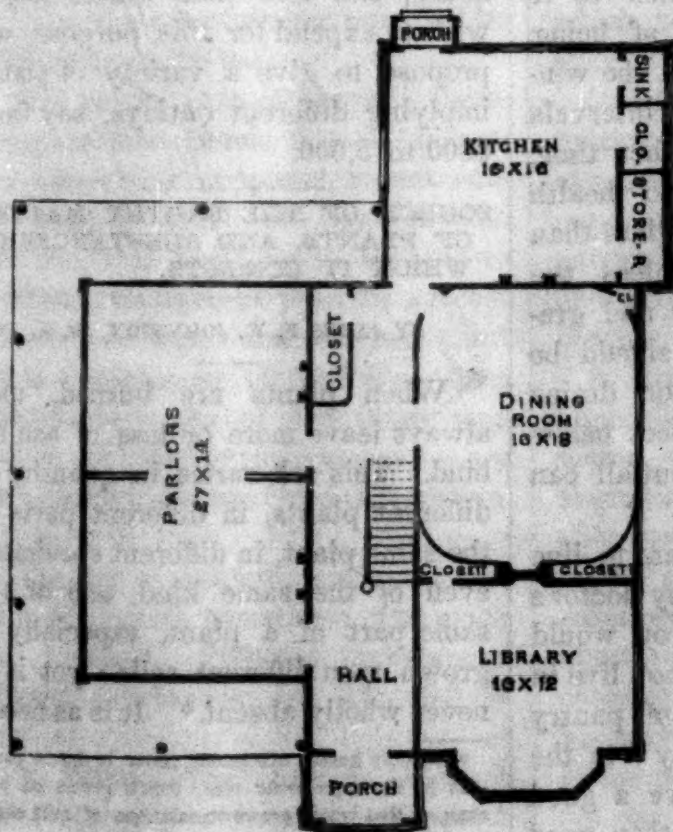
RURAL DWELLINGS.

We would be the very last to urge the farmer into an extravagant and fanciful style of building. The pride

of American farmers runs in another direction, and we are glad it does. A neatly productive farm, every acre giving yearly something more than the interest on its value and the cost of cultivation, is of more consequence to the owner than a showy house.

But all will agree that none better deserves a tasteful and comfortable home than the farmer and the farmer's wife and children. It need not be expensively fanciful, nor yet offend against a pure, elevated taste—may be good enough for a nobleman and yet not a whit too good for a farmer, nor a dollar beyond his means.

The house of which the above gives the elevation, appearance to the eye, and plan of the ground floor,



can be built in a plain, substantial, workman-like manner, of durable materials, for \$2,500 or less—much less we believe, where stone are at hand and lumber plenty.

It gives as will be perceived by the cut, a kitchen, 16x16; a double parlour, 27x14; a dining room, 16x18, and library 16x12, with a piazza on three sides of the parlour, on the ground floor. In the second story are six bed-rooms, all of good size, with plenty of closets. There is in a house so built considerable room for storage in the garret, and a bed-room or two can be constructed if desired, though the heat of summer nights would make them uncomfortable.

Under the whole should be a cellar, with windows on opposite sides for ventilation; and it would be well to have a compartment in the main chimney, to act as a powerful ventilator for the cellar, the entrance to it from the cellar capable of being closed in very cold weather, the windows to be closed at short intervals in the winter, but at no other time. Ten times more injury to health comes from unventilated cellars than most people suppose. Unless the ground is exceedingly dry and gravelly or sandy, the cellar should be drained, and the drain, or drains should be as much as two feet below the bottom, provided an outfall can be had.

A good cellar, if you want to live out your days and have easy doctor's bills; a good kitchen if you would live comfortably, (but do not live in it;) next a good wash room, pantry and wood-house, all "handy" to the kitchen, if you would have a good wife and have her happy; then good

sleeping rooms, equal to fifteen feet square and of good height, that the same air need not be breathed over all night; and last but not unimportant a good parlor, not to be shut up like a "a holy of holies," to be entered only when the daughters have beaux, or when they get married, but to receive your friends, and to use as often and as freely as you please.

Extravagant building is rather for retired merchants, who otherwise cannot readily get their surplus money afloat among the laboring people, than for farmers. But as the latter desire to expend what they have to appropriate to this purpose advantageously, we shall from time to time give such plans, as may seem worthy of their consideration.

As the above plan would cost more than some would wish to invest in a house, and less than others might wish to expend for this purpose, we propose to give a variety of plans, implying different outlays, say from \$800 to 5,000.

SOURCE OF THE EARTHY MATTER OF PLANTS, AND SUBSTANCES OF WHICH IT CONSISTS.

BY JAMES F. W. JOHNSTON, M. A.

When plants are burned, they always leave more or less of ash behind. This ash varies in quantity in different plants, in different parts of the same plant, in different specimens even of the same kind, and of the same part of a plant, especially if grown upon different soils; yet it is never wholly absent.* It is as neces-

*The only known exceptions occur in mould plants—as in the *mycoderma vini*, which grows on pure vinegar, that which grows on solutions of milk sugar, &c. By these no trace of ash is left.

necessary to their existence in a state of perfect health, as any of the elements which constitute the organic or combustible part of their substance. They must obtain it, therefore, along with the food on which they live. It is, in fact, a part of their natural food, since without it they become unhealthy. We shall speak of it, therefore as the *inorganic* food of plants.

We have seen that all the elements which are necessary to the production of the cellular fibre, and of the other organic parts of the plant, may be derived either from the air, from the carbonic acid and watery vapor taken in by the leaves, or from the soil, through the medium of the roots. In the air, however, only rare particles of inorganic or earthy matter are known to float, and these are in a solid form, and therefore unable to enter the minute pores of the leaves. Hence the earthy matter which constitutes the ash of plants must all be derived from the soil.

The earthy part of the soil, therefore, serves a double use. It is not, as some have supposed, a mere substratum, in which the plant may so fix and root itself as to be able to maintain its upright position against the force of winds and tempests; but it is a storehouse of food also, from which the roots of the plant may select such earthy substances as are necessary to, or are fitted to promote, its growth.

The ash of plants consists of a mixture of several, sometimes of as many as fourteen, different substances. These substances are the following:—

1. *Potash*.—The common pearl-ash of the shops is a compound of potash

with carbonic acid, or it is a *carbonate of potash*. By dissolving the pearl-ash in water, and boiling it with quick-lime, the carbonic acid is separated, and potash alone, or caustic potash, as it is often called, is obtained.

2. *Soda*.—The common soda of the shops is a *carbonate of soda*. By boiling it with quick-lime, the carbonic acid is separated, as in the case of pearl-ash, and pure or caustic soda remains. The proportions to be used are 1 lb. of the carbonate to a $\frac{1}{2}$ lb. of lime and 10 lbs. of water.

3. *Lime*.—This is familiar to every one as the *lime shells*, or unslaked lime of the lime-kilns. The unburned lime-stone is a *carbonate of lime*, the carbonic acid in this case being separated from the lime by the roasting in the kiln.

4. *Magnesia*.—This is the calcined magnesia of the shops. The uncalcined is a *carbonate of magnesia*, from which heat drives off the carbonic acid.

5. *Silica*.—This is the name given by chemists to the substance of flint, of quartz, of rock crystal, and of siliceous sands and sandstones. It is particularly abundant in the straws and grasses, and in the glaze of the bamboo and other canes.

6. *Alumina* is the pure earth of alum, obtained by dissolving alum in water, and adding liquid ammonia (hartshorn) to the solution. It forms about two-fifths of the weight of porcelain and pipe-clays, and of some other very stiff kinds of clay. It exists abundantly in most soils, but as an essential constituent of plants it has hitherto been met with only in the ash of the club mosses.

7. *Oxide of Iron*.—The most familiar

form of this substance is the rust that forms on metallic iron in damp places. It is a compound of iron with oxygen, hence the name *oxide*.

There are, however, two oxides of iron. The *red*, which gives its color to rust and to our red soils. This oxide is insoluble in water, and has the property of absorbing ammonia to a certain extent.

The *black* oxide gives their color to many blue clays. It is soluble in weak acids; is produced from the red oxide by the action of organic matter in the soil, and is believed, when so produced, to be very noxious to the roots of plants.

8. *Oxide of Manganese* is a dark brown powder, which consists of oxygen in combination with a metal resembling iron, to which the name of manganese is given. It usually exists in plants and soils in very small quantity only.

9. *Sulphur*.—This substance is well known. It is present in nearly all the parts of plants and animals. It exists largely in mustard seed, is a necessary constituent of the gluten of wheat, of the white of the egg, of the fibre of beef, and of the curd of milk, and forms one-twentieth part of the weight of hair and wool. When sown along with turnip seed, it is said to prevent the attack of the fly.

Sulphuric Acid, or oil of vitriol, has been already described. It forms, with potash, *sulphate of potash*; with soda, *sulphate of soda*, or Glauber's salts; with ammonia, *sulphate of ammonia*; with lime, *sulphate of lime*, or gypsum; with magnesia, *sulphate of magnesia*, or Epsom salts; with alumina, *sulphate of alumina*, which exists in alum; and with oxide of iron, *sul-*

phate of iron, or green vitriol. When the sulphate of potash is combined with sulphate of alumina, it forms common alum.

10. *Phosphorus* and *phosphoric acid* have been already described. Phosphorus is a yellowish waxy substance of a peculiar smell, which smokes in the air, shines in the dark, takes fire by mere rubbing, and burns with a large bright flame and much white smoke. Like sulphur, it exists in all plants and animals, though in comparatively small quantity. Like sulphur, also, it is employed largely in the arts—especially in the manufacture of lucifer matches.

Phosphoric acid forms *phosphates* with potash, soda, ammonia, lime and magnesia. When bones are burned, a large quantity of a white earth remains, (bone earth,) which is chiefly a *phosphate of lime*, consisting of lime and phosphoric acid, in the proportion of $48\frac{1}{2}$ of phosphoric acid to $51\frac{1}{2}$ of lime. Phosphate of lime is present in the ash of plants. Phosphate of magnesia is contained most abundantly in the ash of wheat, barley, &c.

11. *Chlorine*.—This is a very suffocating gas, of a pale yellowish green color, which gives its peculiar smell to chloride of lime, and is used for bleaching and disinfecting purposes. It is readily obtained by pouring muriatic acid (spirit of salt) upon the black oxide of manganese of the shops, contained in a flask, and applying a gentle heat. If the flask be of colorless glass, the color of the gas will immediately become perceptible, and its smell will diffuse itself through the room. This gas is two and one-half times heavier than common air, and a burning taper plunged into it is

speedily extinguished. In combination with the metallic bases of potash, soda, lime, and magnesia, it forms the *chlorides* of potassium, sodium, (common salt), calcium, and magnesium; and in one or other of these states it generally enters the roots of plants, and exists in their ash.

Iodine is a solid substance of a grey color and metallic luster, very much resembling filings of lead. It occurs in small quantities in sea water, and marine and many fresh water plants. In still smaller proportion, it has been recently detected in wood ashes and in those of land plants, and it probably forms a constant though very minute constituent of all the plants we raise for food.

Like their chlorine, they will obtain it generally from the soil through their roots, though, as it has been detected in the atmosphere, they may derive some of this element from the rain water that falls on their leaves.

Bromine is a dark brownish red heavy liquid, possessed of a strong odor, giving a yellowish red vapor, and coloring starch yellow. It also exists in sea water, in certain salt springs, and has been detected in the ashes of certain plants. It probably accompanies chlorine and iodine into all plants, though the proportion, which is still less than that of iodine, has hitherto prevented its presence from being detected.

Fluorine is a very corrosive gas, of which little is yet known. It exists in small quantity in the teeth and bones, and in the blood and milk, of animals. Traces of it also have been detected in the ashes of some plants; so that it is probably neces-

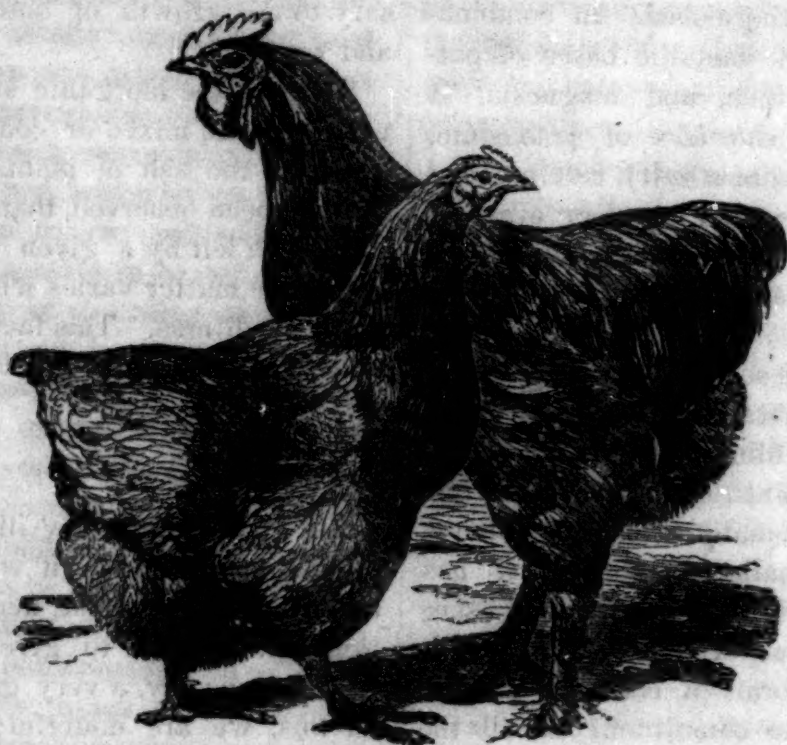
sary to the growth of both animals and vegetables.

Such are the inorganic substances usually found mixed or combined together in the ash of plants. It has already been observed, that the quantity of ash left by a given weight of vegetable matter varies with a great many conditions. This fact deserves a more attentive consideration.

FOWLS.

We give again a few illustrations of varieties. Fowls, if well chosen and properly cared for, may, unquestionably, be made to give a fair return. Some say, a very great profit. Of this, we are doubtful; but they certainly add to the comforts and the pleasures of a country home, and few care to be without them.

The Shanghai. [See next page.]—These are said to have come from Shanghai, in the north of China, and to be still the common fowl of that region. In size and form, they are as represented in the cut—great, coarse things, and very far from being an ornament to the premises, as most will admit, now that the Shanghai fever has passed its crisis. The male fowl sometimes weighs as much as twelve pounds; the female generally two or three pounds less. The crowing of the cock is a half suppressed and half-uttered guttural, about as musical as the grunting of a lazy hog. Their meat is of fair quality.—Whether they consume more food in proportion to the size of the body and of the eggs, we are not certain, but would have handsomer fowls or none, whether they consume less or more.



THE SHANGHAIS.

The Bantum Fowl.—This race is about as diminutive among the fowls as the Alderneys among the cattle; but, unlike the latter, are well formed



THE BANTUM FOWL.

and rather pretty. The cock is a bold, but not always successful fighter. The female is said to lay more eggs than any other kind, to be a good sitter and a faithful mother, but the eggs and the progeny are too small to be of much worth. Few, we presume, would keep them but as a pet—a sort of ornament to the home-

stead, giving, with other fowls, a pleasing variety.



THE BLACK BANTUM.

The *Black Bantum* differs from the common, more in color than in any other respect—is a diminutive fowl, pretty but not useful.

The *Santa Fe (N. M.) Gazette* states that 105,000 sheep are about to be taken from Bernailla and Valentia counties, in that Territory, over-land to California. There is also a drove of 10,000 from Ohio, now at Santa Fe, bound for the same destination.

CHEMISTRY OF AGRICULTURE.

SODA.

This alkali, in various combinations, exists in all soils and manures, and constitutes a part of the food of all plants, more of some, and less of others.

1. *Chloride of Sodium*, (common salt,) has in many districts a decidedly fertilizing influence. A small quantity of salt is absolutely necessary to the growth of crops. Its benefit, as a fertilizer, on any particular field, depends upon whether the soil already contains sufficient of it; for if it does, then more is not required by the plants of an ordinary rotation; but if not, the addition of a little will produce an increased growth of crops.

The question, whether a soil contains sufficient of it, may be decided by analysis; but a pretty good judgment may be formed, by the location. Insular situations, and regions along the coast, not more than eighty or a hundred miles inland, are supplied with it in the spray from the sea. Hence, it is usually found that for ordinary crops, salt is not as beneficial near the sea as farther inland.

Another indication may be obtained from observing the crops, particularly the cereals. If the straw in any given region is feeble, not well glazed, inclined to lodge, it is an indication,—not a certain proof by any means,—but an indication, that salt does not exist in sufficient quantity in the soil. When this indication is observed, it would be worth while, at least, to try the effect of salt.

True, it is not salt that forms the glazing of straw. Silica is the substance which forms the glazing; but

some alkali is requisite to render the silica soluble; and the soda in salt has been found by practical farmers to answer this purpose. Abstract science may have suggested the probability that such would be the result; but practice, in this as in many other cases, has confirmed the theory. In England, where science has taught, and practical men have experimented more accurately, perhaps, than in any other country, the farmers have long believed that the effect of a small application of salt is to stiffen the straw, and thus to enlarge the kernel and render it less liable to blast.

Salt destroys small weeds; where deficient in the soil, it improves the quality of pastures, rendering the feed more palatable to animals; probably, under the same circumstances, it would improve the quality and increase the quantity of hay from mow lands; it is said by some to destroy worms, and while this is denied by others, the probability is that neither are quite right, that the truth lies somewhere between, that it cannot be relied upon as a destroyer of worms, but that it does nevertheless diminish their ravages.

The effects of salt vary on different plants. We have often experimented with it on mow land. One trial was, to scatter salt along a narrow strip of mowing, only a few feet wide, in the spring, and then to watch for the effect. Another was to scatter it along such a line, very thickly at first and then less as we passed on, ending with the least possible quantity. The result was, that where there was the most, the grass was killed outright; where the least was sowed, there was no visible effect; but

there was in every case an intermediate point, where the grass was better than where no salt was applied. This was on a light loam, that had not been manured highly, about a hundred miles from the sea-board. Two conclusions were admissible;—one, that on such land as that, situated as that was, and treated as that had been, a very small dressing of salt, say five or six bushels to the acre, was favorable to the old meadow grasses, and would probably pay for the cost; the other that these grasses will bear but a small dressing, unless there happens at the time a large fall of rain to dissolve the salt and diffuse it through the soil. We found that asparagus would flourish, with three or four times the amount of salt dug into the soil, that would entirely kill the meadow grasses, sown on the turf in dry weather; and we ascertained the truth of what has often been stated, that you may sow on an asparagus bed salt enough to kill the weeds, without injuring the asparagus.

That salt brightens the straw of wheat and oats, and renders the grain heavier per bushel, in the opinion of many English farmers. Some believe that these effects are heightened by a mixture of quicklime with salt, formed by slaking the lime with salt water, at the rate of one bushel of salt to three or four of lime. This makes a very caustic mixture, and should rather be composted with other manure, than applied directly to the crop. It is a valuable addition to swamp muck, tending to hasten its decomposition and at the same time to supply it with those active salts of which it has been deprived by

lying long under water. A load of muck, with half a bushel of this mixture and a bushel of wood ashes, well composted together, is, in our opinion, worth quite as much for Indian corn, or for top dressing upland meadow for grass, as a load of barn yard manure. Whenever lime can be had at a small price and swamp muck abounds, the farmer has an immense resource for enriching his land and enlarging the crops.

Salt has been said to be specially favorable to the mangold wortzel, but of this we have no certain knowledge. For asparagus it is all important, and should be applied in the spring, when you fork in the manure spread on before the setting in of the previous winter, at the rate of at least a bushel to the square rod. Salt in which fish or meats have been packed will answer well for this purpose, only that more should be used, as it is not as strong.

2. *Sulphate of Soda*, or Glauber's salt. This salt has been highly commended in England for clover, the grasses, and the green crops generally. That it would have the same, or even a better, effect than salt in strengthening the straw of the cereals, we can readily believe, as the alkaline effect of the soda would be to dissolve the silica in the soil, while the sulphuric acid could hardly fail on any dry, sweet upland, to be favorable to the growth of crops. But we suppose that the price would preclude its use in this country; or, at least, that common salt, for the purpose of strengthening and brightening the straw, of preventing lodging and the shrinking of the kernel, would be a more economical application.

3. *Carbonate of Soda*.—The common soda of the shops, used for washing, would have a similar effect to strengthen the straw of the cereals. It is hardly cheap enough to be used in field culture, but is used to produce a fine effect in strawberries in the garden. It should be dissolved in much water, and applied as top dressing in fruiting time, or the effect will be to produce more vines than fruit.

In the form of soda ash, it has been applied as a destroyer of the vine worm. It may be sown with the seed, or applied as a top dressing, with good effect, after the ravages of the worm have commenced.

Nitrate of Soda, or saltpetre, as sometimes called. This is known to greatly promote the growth of all young plants, giving them a dark green color. Experiments in England have shown it to be of great value for the wheat crop, on sandy soils. It has been shown also to be exceedingly favorable to the growth of the sugar cane. Might it not prove equally favorable to the corn crop, and perhaps to the sorghum? As immense quantities of it are found in points of South America, along the eastern slope of the Andes, we should not think it strange if, in the progress of our commerce with those countries it should be obtained cheaply, and be among our valuable imports. It would at least be worth while to try its effects on corn, on the sorghum, and on the grasses, as a top dressing applied in the early stages of the growth of these plants.

It is well known to our readers that we are not much in favor of bringing manure ten thousand or five

thousand miles, and having the farmers pay twice as much for it as the importers could afford to sell it for, as has lately been shown with relation to guano. We have thought, and have said freely, better husband the home supplies, and make them go as far as possible—all the manure of the barn, everything that can be composted with it advantageously, the swamp muck, almost everything found, the green sand marl, which is the cheapest fertilizer now offered for all who can obtain it without much inland carriage, and so of every fertilizing substance at home or near home.

But we are by no means sure but that these immense beds of nitrate of soda found in South America may yet prove of great advantage to this country; and we should be glad if trials of its value for various crops, especially for corn, sorghum, and the grasses could be made.

UNDER-DRAINING.

At a meeting of the "American Institute Farmers' Club," Feb 14, 1859, Robert L. Pell, President in the chair, the following conversation took place on the above subject:

Mr. Nash, editor of the *Farmer's Magazine*, said: In relation to land draining definite rules cannot be made adaptable to all situations.

Each case has its own specific rules, as much as each physician's case. The prescriptions for each field to be drained must be made up on the spot. We want draining engineers capable of giving these directions. The reason why farmers do not take more readily to draining is for want of these specific directions.

The farmers are told to lay down tile drains, four feet deep, some say five feet, and nothing else will do, about one in forty feet, all parallel and entering into a main dam, which is to carry off the water. They are told by members of this club that it will cost \$40 an acre. Now I do not believe it need cost \$40 an acre; but one thing is certain;—it will cost more than the farmers of this country can pay *now*, or within twenty years, to drain all the land that needs draining, in this systematic way.

The direction is well enough, with regard to certain lands, in the hands of certain men, but for the great majority of farmers, it is simply impracticable.

A professional land-drainer, one who could penetrate the geology of the soil, one who knows what it is to lift hard heavy soil, who could explain what is best to be done in each particular case, who is in sympathy with the farmer, and would be quite as willing to give him good advice as to get his money, could be immensely useful in this line, and could save the farmer five dollars for every dollar he would take for his services.

In relation to particular soils and situations, such a consulter could show the farmer how he could get substantially the benefits of thorough drainage, with but a tithe of the expense.

Land that is clayey on top and sandy or gravelly and porous below (such I admit as we do not often find, but do find sometimes, a large extent in the aggregate) may be effectually drained, by boring, with a 12 inch ground auger, a hole five or six feet deep and filling to within 18

inches of the top, with small stones. One perforation to four square rods, making forty to the acre, would be enough. This would drain such land as *thoroughly* and as *durably* as can be done, and would cost but a trifle compared with draining by a fixed rule. What you want is to get the water through the soil; this would do it, and you do not care where it goes, provided it no more chills and stiffens your soil. To adhere to one stiff rule for draining, is as absurd as for the physician to prescribe calomel and jallop in all cases without regard to the disease of the patient.

As the doctor must see the patient, judge of his disease, know his constitution, what he needs, and what he can endure, yes, and what he can pay for, inasmuch as there would be no use in advising one without money to make the tour of Europe for his health, so land that is to be drained should be surveyed by some one who can better ascertain its disease and the best and cheapest cure, than a majority of farmers are yet prepared to do.

MR. JOHN G. BERGEN.—It strikes me that all land does not require draining in any way. The patient is well enough without any prescription. Long Island lands, in general, do not require draining; that is, it won't pay to drain such land. I wish Prof. Nash would give us his opinion on that point.

MR. NASH.—Thanks to Mr. Bergen for the opportunity. I have no wish to hold back on that subject—am willing to be known and heard and read by all. Mr. Bergen is right, not every acre needs draining, any more than every man, woman and child

needs a doctor. The Almighty drained your land on Long Island better than any mortal could do it. It is not necessary to do his work over after him. If you will do as well by the top soil of Long Island as he has by the sub-soil, it will be the garden of North America in a few years, not excepting the Barons, falsely so called.

That all land would be made better by the trenching and aerating process of draining, I do not deny, though with regard to very thin soils on a hopeless gravel, it might be denied, but my position, long and openly declared, is this:—not all land would be enough better to pay the cost of draining, as the proportion and demands for produce now are. If these states can become so filled with people, labor so plenty, and food in such demand, that it will be good policy to drain all lands, the world will find it out. So you tell the farmers to drain all their lands *now* they will laugh at you, and so will I. What they want to know is, how to cure their *wet* lands at a cost which they will dare look in the face. It is a very different thing to sit here in the city and advise a forty dollar acre process, from shelling out the money and doing it, especially if the farmer has not the money to shell out, and cannot easily command it.

MR. R. G. PARDEE—It will be difficult to find land in quantity where such draining as Prof. Nash has described will answer as good a purpose as tiles.

MR. NASH.—No, sir, not very difficult. Such land, true, is the exception and not the general rule. But there are considerable breadths here

and there, amounting to a large aggregate, to which the process I have hinted would exactly apply—would take the water off as surely, as from a vat filled with water, if you should bore holes through the bottom.

There is other land, I have no means of judging how much, which will not be freed from water, by such preparations as I have just described, but would be, if the boring were deeper. I once cultivated a field ten years in succession, a beautiful plot of ground, and a feasible, but not rich soil, near the centre of which was a well ten feet deep. However much that field was manured, and however black the top soil was, when turned under in the spring, it would be sure to turn up, a miserable pale yellow, when severed by the next plowing. This showed that the soil was infested with iron in the form of copperas (sulphate of iron, and that to cure it, the water should be taken out, that the sun and air might change that copperas into a brown oxid, harmless, if not beneficial to plants. But there was an exception. Anywhere not over 90 feet from that well the soil would turn up a good color from the bottom of the deepest furrow. Why was this? The well had underdrained about a quarter of an acre perfectly. The inference was that from such wells (10 feet deep, in that soil) would drain an acre, and that such preparations as before described would promote a similar effect, if sufficiently numerous and carried to a sufficient depth and filled with small stones; for certainly if water be conducted downward to the point where it will stand in a well, that is

as well as if it were conducted into the Atlantic ocean.

Suppose you have a well 15 feet deep, but the water never stands above five feet from the bottom; what does that signify, but that the ground above that point is porous and will carry off any amount of water you choose to conduct into it?

Probably there is land, that would be most easily drained, by digging a well in a central point and then conducting drains to it, this might come in play, when a neighbor is contrary, and will not drain his own land, nor give you an outfall through his premises. You might in that case drain it into a well dug for the purpose and laugh at his folly. This draining the water downward, I would not recommend, because it has not been tried, but there certainly can be no doubt, that if water be conducted downward to a point, above which it would not stand in a well, you are as completely rid of it, as if it were transferred to the planet Jupiter.

Money judiciously expended in draining wet lands is well expended. It will return all the way from five to five hundred per cent, according to the nature of the soil and the economy with which the object is effected; and the more economically the object can be effected, provided it be done effectually and for the permanence, the greater the per cent. on the outlay.

Land that does not need draining is that where the sub-soil and the strata below are so porous that the water will pass freely downward at all seasons of the year, so as not to linger about the surface and chill the soil by its evaporation. The aeration of such

soil by draining, added to the benefit of trenching caused by digging the drains, is something, but not enough to balance the expenses.

While it is vastly important that lands, chilled and soured by standing water, either in the soil or above the surface, should be drained; and while this point cannot be too urgently impressed upon the consideration of farmers, *it is true* that the majority of our acres do not require draining, would not pay, and may better be cultivated as they are, at least for long years to come.

GARDEN WORK FOR MARCH.

If you intend to plant trees or shrubs this spring, get your ground ready for them as soon as possible. Dig two holes for them now, while you have more leisure than you will have when the spring work is fairly begun. If you will do so, we are sure you will dig them deeper, larger, and spend more time in putting the sods and surface soil at the bottom, than you would if you put it off until the tree stands by your side, the winds drying up the roots, while you are waiting for the place to be prepared that is to receive it.

Gather a few loads of leaf-mold from the woods, or some soil that has received the drainings of your barnyard. Put a bushel or two of this by each hole ready to be used when your tree is planted. Put a few loads around your fruit-bushes, and perhaps you may discover why, a neighbor Brown's currants have longer bunches than yours, and his gooseberries are much larger, although you have used more stable manure than he has.

and your plants were originally the same variety, but they seem to be quite different now.

If the old asparagus bed has begun to fail, plant another that will be in its prime, by the time the old one entirely fails.

Look at the currant bushes, see that the grubs do not destroy them. Cut off the top of the branches, and if they are hollow, you may be sure there is a grub in it somewhere, and now is the time to find it. Shorten the branch at least one half, and if the remaining portion is hollow run a wire down it to the bottom, which will be pretty sure to kill the grub. Where there is plenty of bushes, and but few hollow stems, it is better to cut the branch entirely away. Where there are but few bushes and the fruit is wanted, the wire can be used and the branches will give fruit for one or two seasons after the fruit is out. Get a few dozen boxes ready, with which you can protect your early cucumbers and mellons from bugs. A good and cheap box can be made by taking boards one half inch thick, and six inches wide, cut into one foot lengths, and nail four of these together, and put thin white muslin for covers; one yard covering nine of them, if it is a full yard wide.

As soon as your seed is planted, set one of these boxes over each hill, and let it remain there until the vines have made six to eight leaves. The boxes should be removed at the time of rain, and when they are put on again see that there are no bugs on the vines.

You can plant at least one week earlier by using such boxes than you can without, as they protect the

vines from cold at night, and the cloth assists in warming the soil by day.

Do not forget to manure the flower beds. Remontant and climbing roses will not be what their name implies unless they are planted in good soil.

Sow your onion seed this month, if your soil is dry enough to work easily and not be full of hard lumps.

Sow a few early beets; also a few radishes to follow those you have in your hot beds, and spinach for a late Spring crop. Lettuce will grow even if the weather is cold, and a slight frost will not kill it.

Look to your hot-beds often—see that your plants do not burn—lift up one end of the sash, and give them air for a few hours in the middle of the day, if the sun shines. If your plants are too much crowded, thin them out. Better have a few good stocking plants than many weak and slender ones.

Pinch off the top of your tomato plants, if they are growing too tall, which will make them push out side branches and be able to hold themselves up when transplanted.

Pull out all weeds as soon as they appear among the plants.

Pepper and early cauliflowers, if not already sown in your hot-beds, should now be sown.

For a fine early cabbage we know of none better than the Winninstadt. It is of a conical shape and very compact. It is a variety but little known, but we presume the seed can be had at any good seed store, and we think it is well worth a trial.

The best cauliflower that we are acquainted with, is the half-early Paris, of the French catalogues. It is sometimes called by New York seedsmen "Nonpariel."

CULTIVATION OF ONIONS.

Too little information on the cultivation of this valuable crop has yet been given, to enable farmers and gardeners generally to grow it in the best way. There is no crop which requires the cultivator to be more persevering, and to attend to its wants more regularly than that of onions. But with most people, for the want of experience on the subject, it seldom does well, while other crops flourish and become very profitable. Those who have had disappointments are better able to give statements upon the subject than I am present.

From the time the seed is in the ground until they are in the market, there is no period when they can be left without receiving attention from some one. After great care, the cultivation is difficult, and if the necessary measures are not adopted to preserve them until the months of June and July there will be a failure. The best soil for the onion is a light, deep, black loam. Such soil, with rotten compost, well mixed in and kept well pulverized through the season, will produce onions in size and quality far from being beat. If the soil be gravelly, or of hard clay loam, they will amount to nothing, for they will dry up before they mature; and if the land is wet they cannot be sown early enough in the spring.

This plant is an exception to the general necessity for a rotation of crops, as experience has demonstrated that the onion can be grown on the same spot of ground successfully for more than forty-five years, if the land is richly manured every season. This fact, however, by no means af-

fects the principle, or the philosophy of rotation; because every one will admit, that were it possible to give to the land what is abstracted by use, as is done with a highly manured onion patch, there would be less need of rotation.

The best varieties for family gardens are the New England white, yellow Strasburg, large red Dutch, the silver skinned and the white globe onions. But people with little or no experience in the cultivation of these varieties will find that Peruvian guano is an excellent manure for them, about $3\frac{1}{2}$ pounds to the square rod is the proper quantity, sown broadcast and raked in previous to sowing the seed. If to be sown in drills, it will be well to use about 2 pounds to the square rod. But if the soil be indifferent, more may be used, but care must be had, as an excess causes the plants to run too much to tops. Guano generally stimulates the early growth of onions, and has also the advantage of being free from weeds. The ground should be well stirred every twelve or fourteen days after the earlier growth, but not too much about the roots. I have known excellent crops raised in this manner; and while undoubtedly to some this will be of no very essential interest, yet if it prove of value to others of your readers my object will be gained.

W. E. J.

The roots of the onion run directly down, and often to a greater depth than we are willing to name, lest we should be thought extravagant.

The frequent stirring of the ground in the early stages of their growth, as advised by W. E. J., is important.

Whether he is right in his reason for not continuing it, we doubt, as the roots of the onion seem to be very much out of the way of the hoe, but practically he is correct; the ground should be let alone after the tops are nearly grown.

Of all other plants, that we now think of, it may be laid down that high hilling is of no use; to onions it is a positive injury. Scrape the earth from rather than to the plants. If some of them fall for want of support, it is not half as bad as high hilling. The onion that falls will cling to the ground by its 25 or 50 top-roots, and still make a good bulb; but one that is hilled around with earth will be misshapen, all the way of a size, soft, spongy and good for nothing, a mere scullion.

Next to good soil and proper manuring, the non-hilling is the most important item in the cultivation of the onion crop. Never hill an onion, but (to make a word) unhill it, if it gets clogged in the earth. The onion was made to grow above ground, not under, like the potato.

RHUBARB.

BY A. S. FULLER.

To grow Rhubarb, or in other words to keep it alive is one thing, but to grow it to perfection is quite another.

The cultivation of this succulent plant has become of so much importance from the fact of its being ready for use at a season when green fruit is scarce, also being a very healthy vegetable, that we will venture to say a few words upon its culture, propagation and its different varieties.

CULTURE.

The soil should be trenched at least two feet deep, (three would be still better.) If it is a heavy loam or clay it should be thoroughly underdrained for rhubarb delights in a moist soil, but not wet. It should be in such a condition that the water will pass off freely after heavy showers, leaving no more in the soil than will be held by capillary attraction, and if it is made so by being thoroughly pulverized there will be no danger of the plants failing in dry weather, or rotting in wet.

A good liberal supply of old, well rotted manure should be mixed with the soil before planting. When the ground is ready, which should be as early in spring as possible, mark out the rows four feet apart and plant the roots three feet apart in the row, covering the crowns three inches deep; cut no stalks the first season, for by so doing you will weaken the plants and injure the next season's crop. If a liberal supply of liquid manure be given them twice or three times during the summer, it will benefit them much.

The liquid from your barn-yard is the best kind to give them, but where this cannot be had, two pounds of guano to a barrel of water is well, and let it stand twenty-four hours to dissolve, applying it just before, or at the time of rain.

Keep the ground free from weeds and stir it often. Cover the ground in autumn with three or four inches of manure, digging it in with a fork in the spring. Repeat the manuring every fall, and you will not fail of having a fine crop of stalks every season. Cut down all seed stalks, as

soon as they appear unless you want to raise seed instead of leaf stalks.

PROPAGATION.

Gather the seed as soon as ripe, and sow in beds covering the seeds about one-half inch deep. Most of the seeds will grow the first season, and make plants with roots a quarter to one-half inch in diameter, by the time winter sets in, when they should be covered with sufficient straw or leaves to keep out the frost; or the seed may be kept and sown late in the fall or early in spring, with less risk of losing the plants than if sown as soon as ripe. Transplant from the seed-bed as soon as the plants have made leaves an inch or more in diameter, always taking a rainy day for the operation if possible. There is no certainty of your getting the same varieties as that from which you gathered the seed. To perpetuate a variety and keep it pure, we must propagate by dividing the roots. This is done by taking up large roots and directing them into as many plants as there are crowns. If you want to make still more of them, as is often the case with a choice variety, the small eyes around the crowns can be cut out with a small piece of the root attached. Plant these in a good rich soil, covering them about two inches deep, and they will make fine plants the first season. The eyes should always be cut in the spring; if cut out in fall, the winter would be very apt to destroy them.

VARIETIES.

Cahoon's Mammoth is the largest variety known in this county. Single stalks have been grown, that weighed

after the leaf was cut off nine pounds each. The stalks are of a light green color, quite brittle and tender if pulled before they attain their full size, and not quite as acid as some of the other varieties. It seldom produces seed stalks, which makes it particularly valuable, where large quantities are grown, giving no trouble to the grower in removing them, as has to be done with most other varieties. It originated in Wisconsin and is but little known in the Eastern States.

Linneaus is an excellent variety, stalk large and long, quite brittle and fine flavor, slightly colored with red at their base. Large quantities of this variety are grown for New York market, where it is esteemed as one of the best if not *the* best.

Myatt's Victoria, is another fine large variety, flavor and texture similar to the Linneaus, but the lower end of the stalks is of a deep red, sometimes extending nearly the whole length. It produces an abundance of seed stalks which is its greatest fault.

There are several other large varieties, but their good qualities we think can be found in those mentioned. The giant and Downing's colossal are also good varieties.

Wilmet's early, Tobalsk, and several other small varieties are sometimes cultivated for their cuttings, but the stalks are so small under the best cultivation that they are of little value.

PEAR CULTURE IN MASSACHUSETTS.—Hon. Marshall P. Wilder furnishes the following list of the most approved descriptions of pears suited to the climate of Massachusetts. This list

had the approbation of the principal growers in this section.

Best Six—Bartlett, Urbaniste, Vicar of Winkfield, Buffum, Buerre d'Anjou, and Lawrence.

For Best twelve—Add to the above Rosteizer, Merriam, Doyenne, Boussoch, Belle, Lucrative, Flemish Beauty and Onondago.

Best six on Quince roots—Louise bonne de Jersey, Urbaniste, Duchess d'Angouleme, Vicar of Winkfield, Buerre d'Anjou and Gout Morceau.

WINTER GROWING OF GRAPES.

The Committee of the Massachusetts Horticultural Society on gardens say:—"On Monday, January 4, the Committee visited the Grapery of M. H. Simpson, Esq., at Saxonville. The Committee have been desirous of continuing their visits to this place, for the purpose of watching Mr. Simpson's novel process of growing grapes, during the most unfavorable season of the year. The price of grapes must be somewhat enhanced on account of the additional cost of cultivation during the winter months, but the gratification they afford to persons suffering from illness is certainly compensation sufficient for the increase in cost.

The Committee found in the first or advanced house, the crop of grapes in as favorable condition as those of previous years. Mr Simpson has heretofore allowed his vines to bear too heavily, and acting upon a former suggestion of the Committee, he had this season thinned the vines so thoroughly, as to leave but about seven pounds to each vine.

The grapes, consisting of Black Hamburgh, Syrian, Frontignan, Zinfandel, Muscat of Alexandria, Canon Hall, and Black Prince, were, to judge from their *appearance*, well ripened, having been started five months previously.

The vines in the adjoining house were just bursting into bloom, and

gave a promise of a good crop. But for the constant watchfulness of Mr. Burns, the gardener, Mr. Simpson would not be enabled to attain such eminent success, as every one familiar with grape culture at this season of the year well knows that constant attention is required day and night.

For the American Farmers' Magazine.

Our Peasants,—They are Peers.

A SONG BY THE "PEASANT BARD."

Our peasants,—they are peers!

No slavish serfs are they;

And all unawed by menial fears,

Command, and yet obey.

Command for truth and right;

Obeys righteous laws;

And ever foremost in the fight

That hath an honest cause.

Our peasants,—they are peers!

The lords and ladies, too;

And tho' no crest its sheen uprears,

Their nobleness is true.

For what are titles worth?

Mere tinsel on a name,

To give a mortal worm of earth

A perishable fame.

New Jersey Lands.

Are the public aware, Mr. Editor, that in your adjoining state are to be had lands, embracing nearly whole counties, and lying between the great cities of New York and Philadelphia, which are yet in their virgin condition, and easy of cultivation, and which, equally well with the farms of Monmouth county, with ordinary good treatment, amply reward the labor of the husbandmen?

South Jersey, below the village of Freehold, extending about one hundred miles to Delaware bay, and for an average width of twenty-five miles from the ocean, is occupied by a very

sparse population, and with few exceptions, is nearly uncultivated. The soil is sandy, with however a sub-soil of good loam, and with the addition of lime and *marl* (the latter found in unlimited quantities just beneath the surface within a belt some fifteen miles in width, extending from the Neversink hills to Delaware bay below Philadelphia) is capable of producing in abundance all the varieties of vegetables consumed in our great cities.

Hitherto South Jersey has been owned and occupied principally by large iron manufacturers, and its almost only product, *its timber*, has been converted into charcoal, for the smelting of the bog iron ore, profusely spread over the beds of its numerous streams. This trade is now annihilated, and the attention of its inhabitants is very seriously turned to agriculture, as in future, its great source of wealth. Such however is their poverty and lack of enterprise, resulting from their secluded position, that the lands so easily transformed into prosperous and valuable farms, are to be had at fabulously low prices, and afford rare opportunities for profitable investment to men of enterprise and means. Where however there is any spirit of enterprise, we can now see specimens of good culture, attended with remarkably profitable results as before stated, all the crops consumed in our cities, such as potatoes (of both sorts) roots of all kinds, Indian corn, rye, mellons, grasses &c., grow well and afford, with the ordinary outlay for manures, as large returns as do lands selling in Monmouth county at from \$75 to \$200 per acre.

The writer asserts that which he knows, having resided in Ocean county for nearly twenty years, in a region where the climate is highly (even proverbially) salubrious, and the water is unsurpassed, and during all that period feeling that nothing but better communications with other parts of the country and the infusion of a dense population of intelligent industrious citizens was wanted, to render the whole southern moiety of the state as desirable a residence as can elsewhere be found.

This whole country is about being opened to the world by the Raritan and Delaware Bay Railroad, extending from Raritan Bay, opposite to the Narrows in New York harbor, to the Delaware Bay, near Cape May, communicating also directly with Philadelphia, and now under construction.

The universal experience of English farmers is, that upon sandy lands they grow rich, while the reverse is the case upon clay lands, hard to cultivate; and it is safe to assert, that the prediction of the late lamented Jesse Buel, made after a tour through South Jersey will soon be verified, that it would, when blessed with free communication, be made "the garden of the state."

What Next?

A recent number of the *Life Illustrated*, says:—"Everybody may not be aware that nearly all the pretended wine in this market (New York city) is a spurious concoction of cider, whiskey, sugar, water, and villainous drugs; and that much of the sparkling champagne, which is sold

at \$2 a bottle, is manufactured of turnip-juice instead of the juice of the grape. A few days since a freight train of the Erie Railroad brought to this city 20 barrels of turnip-juice, which will soon, no doubt, find purchasers, who will eagerly guzzle it under the hallucination that they are enjoying themselves on the choicest of the imported article; the guzzlers, however, though cheated, are not robbed at all, for the turnip-juice article is actually the least injurious of the two."

QUESTION AND ANSWER.—A subscriber inquires "Why a spirit lamp gives more light, when a pin is sticking vertically near the center of the wick and blaze?" We suppose that, if the fact be as he assumes, it is because the pin being a good conductor of heat, carries the heat of the blaze downward, and thus elevates the temperature of the alcohol before it reaches the burning point. The alcohol rises through the pores of the wick by capillary attraction, as water rises in a sponge, or in a soil, or any other porous substance. If slightly warmed, by the heat conveyed downward through the pin, it may ascend more freely. In this case the extra light may be ascribed to the more rapid consumption of the alcohol. We should hardly think that a given quantity of alcohol would give more light for having a pin stuck in the wick.

The hardest tallow will burn in an oil lamp, if it have a large wick and metallic rod running down through the blaze and wick into the reservoir, simply because the heat conveyed down the rod keeps it in a liquid

state. Now alcohol needs no added heat, as tallow does, to keep it in a liquid state; but it may be, and probably is more perfectly fluid, flowing more easily along the pores of the wick, when a little warmed; and it probably volatilizes—passes into vapor, a sort of burning-gas, more readily when warm than when cold, creating more light, for the sole reason that it burns out faster.

If our view is correct, it follows that enlarging the wick would have the same effect, and that in either case you get more light only by burning more alcohol.

MR. EDITOR.—Having told us what is most necessary to be noted in our neighborhood, you seem to have leaped all at once to the other side of the sphere, where May comes in November, and January in July. This may be so, but it is not quite easy for us *Northerners* to comprehend it. If I rightly understand the habits of the people of Chili, there is nothing in them to commend it to our favor, or to induce emigration thither. The condition of the laborers there, as to *comfort* or *moral purity*, is in no respect superior to that of our swine. Can it be that there is any part of God's heritage which is so degraded? If there be so, let us thank the Author of our being, that we are not as other men are; and most of all, that our wives and daughters are not degraded, like those in more sunny climes. Although our lot is hard—sustained only by continued toil—still, when duly guarded, it is *chaste* and *just*; and with these virtues in perfection, we need no more.

Feb. 16, 1859.

J. W. P.

True there is nothing in Chili to induce us to leave our own country, nor is there anywhere else under the whole heavens, still it is desirable to know our neighbors. We regard Mr. Hunter's article as of great value, though American farmers may not think it wise to imitate the thrashing frolic of the Chilians, or their mode of treading the vintage, nor prefer the Hacienda to the farm, nor a religion of ceremonies to one of reason, nor the primitive implements, customs, and usages of that people, to our own more advanced civilization. The next article, from the same writer, will be on Japan—its agriculture, modes of cultivation, trade with this country, &c., &c. The writer being at Washington and having access to the latest advices received by the Government, will make it exceedingly valuable, and especially at this time, when our intercourse with that country has just commenced and is rapidly increasing.

Had our correspondent seen as much of the Spanish character as we have; had the many excellent traits belonging to it been proclaimed as trumpet-tongued as its faults; had not our school geographies, from the days of Morse downwards, represented the Spaniard as "haughty, indolent, revengeful," and nothing else, he would not have formed so low an opinion of the Chilians. We have been thrown into society with the race from a boy up, have associated with Spaniards from every part of Spain and from Southern and Central America, and we now declare that the old "haughty, indolent, revengeful," is a lie. It is without one shadow of truth, as regards the great mass of

that people. To say that they are kind-hearted, affectionate, true in their friendships, slow "to cut" an old acquaintance, ready to accept an apology if wronged, but rather strong in their resentments when perseveringly abused, and sometimes too hasty in action, when a revengeful feeling arises, would be about the truth.

Owing to bad government, badly administered, Spaniards may have become less sincere and truthful in their utterances to your face than Englishmen, and possibly than Americans. The latter have nothing to brag of on that score. Such has been the character of the government and of the religion of old Spain, such its statesmen and its priesthood, that it would be strange if the masses had not partaken of the faults of both. Yet of scores with whom we have been intimately acquainted, men, women, and children, we have seen in nearly all more to admire and love than to carp at.

We read Mr. Hunter's article with entirely different eyes from those of our correspondent. As we read, those Chilians are a laughing, singing, dancing, kind-hearted, friendly set of mortals; happy when at work, and happy when the work is done, and morally just about as pure as our immaculate selves. We wish they had a little more education and a more reasonable religion; with those two things they would soon have plows invented since Abraham's time, and other things accordingly.

THE HONEY BLADE GRASS. — ADVERTISING.—We believe it to be the general rule that the advertiser, and not the publisher, is responsible for announce-

ments advertised. Accordingly when we read of seeds that will give twice the value of any other from the same land, of a fertilizer giving twice its cost the first year ; or of a medicine that will cure all diseases, and perchance raise the dead, we think to ourselves, it is not the editor or the publisher that says this, but the man who wants to sell the article, and we are prepared to make some grains of allowance. If the editor allows vendors to say what they please, and then gives his endorsement to what he is satisfied is a good thing, fit to be spread out as a temptation before the public, but withholds it from every thing else, we suppose the rule to be quite as high as generally prevails in this country or any other. Humbuggers, throughout Christendom at least, and we know not how much farther, have the power to put their humbugs before the people as widely as the most honorable dealers, and sometimes more widely, for the reason that their traffic gives them more money to do it with. In this matter it is specially true that "money makes the mare go." Such is the general rule with regard to advertising—the more money, the more paper and ink. We mean to be guided by a higher rule. We have been guided by a higher rule, not only with regard to advertising, but with respect to lending our name (whatever it might be worth) to any fraudulent scheme—any attempt to get off a worthless article, or to get an exorbitant price for a good article. How much is the difference, whether a manufacturer gets off an article for ten dollars, which he knows will do the buyer no good, or gets from him twenty dollars

for a really good article, which he could manufacture at a whopping profit for ten dollars? We regard one as much a humbug as the other, and our purpose has been firmly to set our face against both.

So far as doing nothing to help them on is concerned, our resolve has in the main been well kept. In a few instances, we, like others, have been deceived ; but we have not advertised things, knowing at the time, that the object was to defraud, either by a worthless article or by an exorbitant price ; and we never have commended anything without knowing it to be what the advertiser claimed—a good thing at a reasonable price.

But a cotemporary now tells us that the Honey Blade Grass Seed, advertised in our last, is neither more nor less than Hungarian Grass Seed—a good thing, as we believe is fully conceded on all hands, but offered under a fictitious name, with a view to get for it about five times its real worth. If this proves to be true, we have only to say that no one detests the scheme more than we. People in the country are not ignorant, as compared with those of the city. It happens, that of all that is really worth knowing, the former know much more than the latter. But with regard to market values, those who are "on 'change" every day have the advantage of such as live in remote districts. To avail themselves of this advantage for the purpose of getting exorbitant prices, has our hearty execration ; and we will do nothing, knowingly, to aid it.

A gentleman, whom we have been wont to regard as a fair and candid man, called at our office at a time


when we were pressed with business, wishing to get an advertisement inserted. We had no time to investigate the matter, and told him that if he would say the article offered was a good one, and to be put at a fair price, we would in this case, though contrary to our general practice, insert it without investigation. He replied that it was an article of real, known value, and at a fair price. We sent it to the printer, and it went into our February No., but will not appear again, if the assertions of our cotemporary shall prove correct, as we very much suspect they will.

We value the confidence of our readers, and will not part with it for any consideration, certainly not for the paltry price of an advertisement. If we were disposed to sell out we would ask a higher price. When in London, in 1853, we found parties concocting a manure from a little hair and a great deal of the undigested food from the maws of slaughtered cattle. This they dried, ground up with sundry matters to give it weight, pressed and packed for sale at about the price of Peruvian Guano. As we subsequently learned, they had played the game with English farmers till it was played out, and were looking to this country for new victims. A very large per centage was offered, if we would aid the project. We have scarcely a doubt, when we consider the plausible showings of the Company, that their fertilizer was all hair, and how much it appeared as if it was veritably so, that we could have made more money by selling ourself first, and then as many of our countrymen as possible, than we could by publishing this work ten years, with

ten thousand subscribers all that time. But the bait did not take with us. No other ever has, and what is more, none ever will.

We will not for any consideration aid or abet, nor, when the facts are clear, fail to resist any scheme to defraud the farmers of this country. Our readers will bear us witness, on the matter of fertilizers, that in almost every number, we advise them to rely on their own resources, to make the most of the home fertilizers, that they can hardly afford to use those that are far fetched, and consequently have paid many and exorbitant profits before reaching them. We do not so advise because money cannot be had for an exactly opposite course, if desired on these conditions. As a general rule swindlers pay well for that kind of influence, which one in our position is supposed to be able to exert, but they never have paid us and never will, for the simple reasons that their offers are not acceptable, in view of the conditions implied.

REMEDY FOR BRONCHITIS.—A writer in the *Baltimore Sun*, who has been afflicted severely in his family by that appalling disease, bronchitis, has found relief from the following remedy: "Take honey in the comb, squeeze it out and dilute with a little water, and wet the lips and mouth occasionally with it." It had never been known to fail in cases where children had throats so swollen as to be unable to swallow. It is certainly a simple remedy and may be a very efficacious one.

 A cute Yankee in Kansas sells liquor in a gun barrel instead of a glass, that he may avoid the law, and make it appear beyond dispute that he is selling liquor by the barrel.

THE SALT MINES AT ONONDAGA.—The Superintendent of the Onondaga Salt Mines, Mr. Vivus W. Smith, has made his report to the Legislature. From his statements, it appears that the manufacture last year ran up to 7,033,219 bushels, or 1,406,644 bargels, an increase of a million bushels over the figures of 1856. Of this quantity, 5,531,827 bushels were fine, and 1,500,392 coarse or solar salt. The revenue, one cent duty a bushel, amounted to \$70,332 19; penalties, rents, &c., \$57 40. Paid for salaries, erection, repairs, materials, &c., \$50,622 66. The present means of the State will permit the furnishing of brine sufficient to manufacture ten millions of bushels. Mr. Smith thinks the quality of salt to be improving. There are now 321 salt blocks, capable of manufacturing 12,500,000 bbls. of salt. About seven-eighths of the salt goes to other States. During the year, 1,370,269 bushels were received at Buffalo, and 4,349,033 at Oswego.


EDUCATION.—Thewal thought it very unfair to influence a child's mind by inculcating opinions before it should have come to years of discretion and be able to choose for itself. I showed him my garden. "How so?" said he; "it is covered with weeds." "Oh!" I replied, "that's because it has not yet come to its age of discretion and choice. The weeds, you see, have taken the liberty to grow, and I thought it unfair in me to prejudice the soil towards roses and strawberries."—*Coleridge*.


POTATOES.—Mr. S. N. Allen, of Greece, Monroe County, N. Y., states that he produced, the past season, 381 bushels of potatoes from six bushels of seed. Variety, the purple mercer. The potatoes were cut fine, having two to three eyes in a piece, two pieces in each hill. Planted about June 10th, on light sandy soil, part of the ground barley stubble, and part clover and Timothy sod. Used some six loads of barn-yard manure.


HOW TO STOP BLOOD.—Take the fine dust of teas, or the scrapings of the inside of sole leather, and bind it closely upon the wound, and the blood will soon cease to flow. These articles are recommended because they are at all times accessible, and easy to be obtained. After the blood has ceased to flow, laudanum may be advantageously applied to the wound. Due regard to these instructions will save agitation of mind and a running for the surgeon, who would probably make a no better prescription if present.—*Salem Gazette*.

RECIPE FOR POVERTY.—If you want to keep poor, buy two glasses of ale each day, amounting at the end of the year, to \$38 50; smoke three cigars, \$54 05; keep a big lazy dog, \$15; a cat, \$5; in all, the snug little sum of \$101 25. Enough to buy several barrels of flour, one hundred bushels of coal, one barrel of sugar, one sack of coffee, a good coat, a respectable dress, and half-a-dozen pair of shoes—more or less.

SHEEP IN VIRGINIA.—A correspondent of the *Boston Cultivator*, writing from the recent U. S. Agricultural Exhibition at Richmond, Va., says, the Virginians are introducing sheep culture with success. One farmer who had some very fine woolled sheep on exhibition, informed the writer that he now keeps a thousand sheep on his plantation, and raises more wheat than when he had no sheep. Such is always the effect of the judicious mingling of stock and grain growing—especially sheep grazing on land long devoted solely to the plow.

 Ribbons of any kind should be washed in cold soap suds, and not rinsed.

 Oat straw is best for filling beds; should be changed once a year.

 Industry is the mother of plenty.

SAVING CORN SEED.—Remember, that every new plant raised from grain, is more or less a new variety—and to have it constantly improving, save the very best. In husking take such ears as are finest, and from the most prolific stalks. Ten years of constant care like this, will, step by step, effect a great improvement. Potatoes not being raised from seed, but only by a multiplication of the same plant, will not thus improve.—*Panhandle Farmer.*


The same journal says with regard to fattening swine ;—


To give hogs a start, when first put up for fattening, there is in my opinion no better food than good ripe pumpkins, boiled and steamed with a moiety of potatoes, and the whole well seasoned with meal scalded in and mixed with milk. There is a sweetness in the boiled pumpkin which is very attractive to his pigship. Indeed all the trouble with this kind of food is, that it is difficult to get enough to supply their wants. The writer has fed to a pen of 20, two kettles, of sixty gallons, per day, for some two weeks. I think to commence on this is even preferable to hard corn.


While upon this subject, allow me just to suggest how large an amount of good fertilizing matter is usually thrown away in feeding our pork. The common course is to have an enclosed pen for the swine to eat and sleep in and all the manure made usually goes into an uncovered back yard—probably a real mud hole, where the manure made from feeding a large quantity of grain is allowed to go and be leached and evaporated by the rains and sun ; and when we come to get out this valuable compound the next season to apply to our soil, we find it like the Irishman's flea—not there. Now we all talk about the value of swine's manure and with truth, for it is indeed supposed to be more fertilizing than that of any other animal. This being so, why not endeavor to save it, and not


actually throw it away in the manner described ? If no better remedy presents just make a temporary cover to the hog yard, of rough boards or anything that will keep out water, and just supply the pigs with plenty of material to work up—muck, turf, straw, weeds, leaves, or indeed almost anything of a decaying vegetable nature, and the thing is done—when perchance the next season you will find that instead of five loads of leached manure, you will have just four times the amount, and a little better article at that.


HOW COFFEE CAME TO BE USED.—The discovery of its use as a beverage, is ascribed to the Superior of a monastery in Arabia, who, desirous of preventing the monks from sleeping at their nocturnal services, made them drink the infusion of coffee, upon the report of some shepherds, who observed that their flocks were more lively after browsing on the fruit of that plant. A single plant brought there in 1614 became the parent stock of all coffee plantations in the West Indies. The extent of consumption can now hardly be realized. The United States alone annually consume at the cost of its landing, from fifteen to sixteen million of dollars.

 A gallon of strong ley put in a barrel of hard water will make it as soft as rain water.

 If your flat irons are rough, rub them well with fine salt and it will make them smooth.


 A bit of soap rubbed on the hinges of a door will prevent their creaking.


 Green should be the prevailing color of hangings and window drapery.


 Scotch snuff put on the holes where crickets come out will destroy them.

TEACH CHILDREN TO REMEMBER THE POOR.—In almost every rural neighborhood and country village—certainly in all our large towns and cities—there is more or less destitution and suffering. There may be found many aged persons, blest with but few of the comforts of life, who, though not classed with the extremely wretched, may well be considered objects of our care and sympathy—to whom a little friendly office may seem grateful, and which may meet the response of an appreciating heart. How pleasant to generous goodness, thus to bestow even little acts of kindness—to break the cloud that hovers around the dwelling of misfortune and want, and let in, though but for one moment, the sunshine of a watchful benevolence.

Let us remember the aged ; and not the aged only—but the sorrowing and the wretched on whose cheerless hearthstones the fires have gone out or are now burning but dimly—who may have seen sunnier hours and found more numerous friends. Teach the children to remember them, and to drop in upon them in little crowds of mercy, bearing thither their youthful offerings and breathing around them the freshness of their young hearts. How like an angel presence shall be theirs to the bowed and weary pilgrims—to the stricken, the destitute, and the famishing. How blessed to them, too, shall be the gentle and loving mission. It shall develop the goodness of their young hearts ; and unseal a fountain, it may be, whose waters may yet gladden the desolate places of earth. It may train them to the ministry of God ; quicken the better and holier feelings of their nature into activity, and kindle a flame upon the altar of their hearts which even a nation may hail hereafter as a light of living purity.

 If you are buying carpet for durability ; chose small figures.

 Half a cranberry bound on a corn will soon kill it.

 Wood ashes and common salt wet with water, will stop the cracks of a stove, and prevent the smoke from escaping.

Wool in the United States.

The growth and diffusion of sheep husbandry in the United States are just objects of national solicitude. Though pre-eminently an agricultural people, we do not, and probably never did grow the wool with which we are clothed. Though producers of meat in excess of our own consumption, we are not adequately supplied with mutton, which is among the best of meats. Our farmers live mainly on pork, which is the grossest, least cleanly, least healthy, of meats, and which must mainly be cured and preserved by salting, whereas mutton is much cheaper, more palatable, less conducive to disease, and may be had fresh through two-thirds of the year. Sheep husbandry, but for the ravages of vagrant dogs, that ought to be dead, might be profitably prosecuted in nearly every State of the Union. The slopes of the Alleghanies, and of every other mountain chain, from Maine to Alabama, may be profitably devoted to this pursuit, when unfit for any other.—Pennsylvania alone, especially near her northern boundary, has millions of acres yet wild and unproductive, which might profitably be devoted to the production of choice mutton for the New-York and Philadelphia markets. Virginia has at least an equal area of land admirably adapted to sheep husbandry, and to none other. Texas has already some large flocks which are rapidly increasing ; and in due time the whole region, stretching several hundreds of miles eastward from the Rocky Mountains through New Mexico, Western Kansas and Nebraska, from lat. 49 down to the line of Texas and still lower, will be found admirably suited to sheep growing. This is a pursuit requiring rather skill and watchfulness than the severest toil, which yields quick and generous returns, and which does not exhaust but tends to improve the soil. The relative cheapness with which wool may be transported, the ease and safety with which it may be kept on hand, are great recommendations. Of one thousand bushels of Indian corn grown in Iowa and shipped eastward for a market, at least six hundred will have been consumed in freight and charges by the time the grain reaches this city, and another hundred by the time the remainder is laid down in English Manchester or Birmingham, leaving but three hundred to be returned to Iowa in wares or fabrics ; while one thousand pounds of wool may be transported from Iowa to the British manufacturing districts for a twentieth part of its value. In other words : a Western farmer who grows grain for market, must sell it for

less than half its average price throughout the civilized world; whereas, if he grows wool, he can be sure of a cash market at his own door only five to ten per cent. lower than its price in the very highest markets. And, should the price be low one year and the producer desire to hold over, wool may be securely stored for less than one per cent. per annum of its value, and will lose nothing by

keeping; whereas grain is not only more bulky and more exposed to depredations from vermin, but deteriorates in quality simply from being kept on hand. As our settlements shall extend further and further Westward, therefore, away from the seaboard and from cheap transportation, the inducements to sheep husbandry must be constantly increasing.—*N. Y. Tribune.*

FOR THE CHILDREN.



The Camphor Tree.

Camphor is obtained from the camphora officinarum, (*Laurus camphora*, Linnaeus,) a native of China and Japan. A different species of the camphor tree, giving a harder, more brittle and higher priced article is found also in Borneo and Sumatra.

To obtain camphor, the tree is cut down, severed into small pieces, and the camphor is taken from the pores—or open spaces in the wood—where it is found in small whitish flakes, perpendicularly situated in veins, in and near the center of the tree.

It is then washed in soap and water to dis-

solve and wash out all impurities. Camphor oil is the substance from which camphor is formed—is what would become camphor if left longer in the wood, but being taken out before the process of hardening is gone through with, it retains a liquid, oily consistence.

Camphor should not be used freely and indiscriminately. As a medicine, we would use it if a skillful physician prescribed it, but not at every body's advice. We have known people to take it largely to prevent the cholera, and after taking it awhile, there was hardly enough left of them to take the cholera or any other disease. Their skin seemed to have lain down on the bones and gone to sleep. If any of our young readers desire to be thin and wrinkled at thirty-five, like any old people, we advise them to apply to the camphor bottle daily. Otherwise, we would have them take it only when their mothers direct; and we should hope the mothers would not prescribe it for every ailment.

The tree is rather a pretty one. As represented above (and we believe the representation to be a correct one) it is from thirty to thirty-four feet high, with thick, wide spread and strong branches. Our little readers may ask how this picture represents a tree a little more than thirty feet high?

We will answer—in the inquisitive style—by asking another question. If you should see your father or brother standing by a high fence, if the top of the hat appeared on a level with that of the fence, and if you knew that your father or brother, in hat and boots, stands about six feet high, then would you not know just about how high that fence is?

By casting an eye at the above cut, you

will see that the tree is just about six times as tall as the persons standing under it.—Therefore it would be safe to conclude that the artist meant to have us see it as about thirty feet high, or from that to thirty-five.

It is a good plan for children to exercise their eyes to judge of heights, breadths and distances. Guess at the width, in inches, of the book you hold in your hand; of its length, its thickness, and then measure and see how near you came.

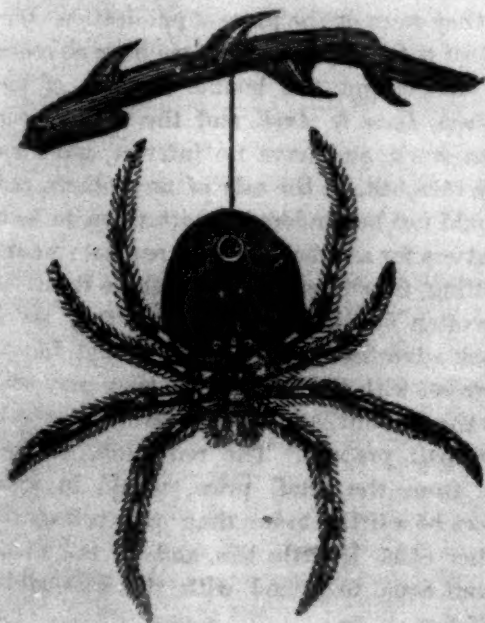
Again you may express an opinion, in feet, of the length, width and height of the room in which you are, and then measure to see how good your judgment on such matters is.

The boys would do well to go out and throw stones or snow balls as far as they can, to estimate the distance in rods, by the eye, and then correct their judgment by measuring. Every boy who intends to be a farmer should learn to pace land: that is, to step over it at such a pace that every five of his steps will carry him just a rod.

A little spirited guessing of this kind, where each boy is anxious to win the mark nearest to the truth, tends greatly to improve the judgment, in a thousand matters which will be important in life.

The Spider.

How wonderful that the spider—of which there are a great many kinds—should have been endowed with the faculty of secreting



and emitting at pleasure, a substance, which, on exposure to air, will make a tough, fibrous structure, as strong, at least, as the farmer's log chain in proportion to its weight! And yet it is so. As in the cut, some spiders avail themselves of this endowment for descending from heights. Others avail themselves of it for constructing snares and traps to catch their prey.

Children should observe the habits of animals and insects. Some people are afraid of science. They think it is for the few, and that they should have nothing to do with it. But a vast proportion of all the science in the world comes from observation, taking notice of what is going on about us; and it is as easy to go through the world with the eyes open as with them shut.

A Story for Boys.

It is related of a Persian mother, that on giving her son some forty pieces of silver as his portion, she made him swear never to tell a lie, and said, "Go my son, I consign thee to God, for we shall not meet until the day of judgment."

The youth went away, and the party he travelled with, was assaulted by robbers. One fellow asked the boy what he had got, he said, "Forty dinars are sewed up in my garments." He laughed, thinking he jested. Another asked him the same question, and he received a like answer.

At last the chief called him and asked the same question, and he said, "I have told two of your people already, that I have forty dinars sewed up in my cloths."

He ordered the cloths to be ripped open, and found the money.

"And how came you to tell this?" said he.

"Because," replied the child, "I would not be false to my mother, whom I promised, never to tell a lie."

"Child," said the robber, "art thou so mindful of thy duty to thy mother at thy years, and am I so insensible, at my age, of the duty I owe to my God. Give me thy hand that I may swear repentance on it." He did so, and his followers were all struck with the scene.

"You have been our leader in guilt," said they to the thief, "be the same in the path of virtue," and they instantly made a restitution of spoils, and vowed repentance on the boy's hand.

There is a moral in this story which goes beyond the direct influence of the mother on the child. The noble sentiment infused into the breast of the child, is again transferred from breast to breast, till those who felt it know not whence it came.—*Jeff. Ch. Neira.*

BOOK NOTICES, &c.

AMERICAN WEEDS AND USEFUL PLANTS; being a second and illustrated edition of Agricultural Botany, an Examination and Description of Useful Plants and Weeds, which merit the notice or require the attention of American Agriculturists; by WILLIAM DARLINGTON, M.D.; Revised, with Additions, by GEORGE THURBUR, Prof. of Mat. Med., and Botany, etc., in the N. Y. College of Pharmacy. New York: A. O. Moore & Co., Agricultural Book Publishers, No. 140 Fulton street.

The title page, copied above, sufficiently sets forth the object of this book. Nothing that we could say would add to the reputation of its author. The revision, with additions, by Prof. Thurbur, we believe to have been well done. The engravings of plants, worthy of the farmer's attention, whether for the purpose of cultivating or eradicating them, are from very numerous, beautiful and useful illustrations, and must have been got up at great expense to the publisher. The work is thoroughly scientific, embracing in a space of one hundred and sixty pages, a very large amount of useful matter, in a form not above the comprehension of the many, though it is a work to be studied rather than merely read, and is specially valuable as a book of reference.

THE UNIVERSITY: A Discourse by DR. TAPPAN, President of the University of Michigan, at Ann Arbor.

This is a calm and able review of the University system of Education. It is just what might be expected from its author—sound, practical, convincing, and instructive.—Although we do not suppose it is for sale—at least it was not published for that purpose—yet we advise persons who are projecting institutions for the education of the young to procure a copy, if they can by any means, as its perusal by such would be likely to prevent many errors; and the prevention in the outset is far easier than the eradication when firmly established.

HOW SLOW MISTAKES ARE TO GET CORRECTED!—This work was formerly published at three dollars a year, though it then contained less matter than now, and very much less that was original and for the times. It was subsequently published at two dollars. Many

suppose that one or the other of these figures is still the price, and it seems hard to convince them of the contrary. But this works well for us in some respects. A subscriber on North river in a good old Dutch settlement, the other day sent us two dollars for the current volume. We wrote back: "You have paid for two; send us the other name." The name was sent. Another, in Ohio, sent two dollars for this year. We wrote him to send on a batch of names and money to make all right, at one dollar each, and he did it. Another, in Connecticut, sent two dollars for the current year. We wrote him: "You have sent us too much. You must give us another name, or we must send you a receipt for two years, or return you a dollar. Which shall it be?" He sent another name, and in a few days sent twelve additional names with money to match. And so it goes in a great many cases. But we would rather all should know that we are sending this work at one dollar a year, and less to clubs. [See first page of cover.] Will our readers pass it along? That will be the best advertising for us; and the more will it give to expend on the work for them. Our circle of readers is every day enlarging, and we mean it shall be as well for them as for ourselves.

PURCHASING BOOKS.—It may be presumed that our readers occasionally see advertised an Agricultural or other book, treating on some subject in which they feel an interest at the time, and which they would purchase if they were at the place of publication. Our object is to say, that while we have no books to sell, except the bound volumes of the *Plough, Loom & Anvil*, and the files of our own work, and have no interest, not even the remotest, in the sale of any others, and would not be hindered by attention to such matters for any but our own readers; we are willing, notwithstanding, to serve them—as we often do—in this way. If they see a book advertised, which they would like to possess, with the retail price, they may send us the amount, and we will return the book by mail, prepaid. The reduction, allowed us, from the retail price, would in some cases be a little more than the postage, in other cases a little less, and on the whole about equal to it, and with this we shall be satisfied.

MARKETS, &c.

NEW JERSEY GREEN SAND MARL.—We have often taken occasion to commend this Fertilizer, and we do so again. It is the cheapest fertilizer offered, so far as our knowledge extends. Indeed it is almost the only one which we can commend unqualifiedly as certain to return to the farmer his money, with interest and a handsome profit. This will, for a certainty, wherever it can be put into the soil for not over fourteen cents a bushel, (which is just double of what it can be shipped for on the Jersey shore. It is better for potatoes than any other crop, but is good for all crops, and on nearly all soils: but more especially so on sandy soils and lightish loams. Its power to give compactness to a soil naturally too light is very great.

MOUNT PLEASANT INSTITUTE, AMHERST, MASS.—From our past connection with that school, and our knowledge of its present management, we can say, that its location is healthful and exquisitely beautiful, affording for boys a most desirable retreat; and that its arrangements are such, that in addition to accurate scholarship, every attention is given to physical wants and to the formation of manly habits and correct principles.

We shall be happy to give more particular information, should any desire it.

WHOLESALE PRICES CURRENT.

New York, March 1st, 1859.

ASHES, P 100 lbs.		
Pots,.....	\$5 75	
Pearls,.....	\$5 75 @	5 87½
COTTON, P lb.		
Middling,.....	12 @	13
COFFEE.		
Various grades,.....	11 @	12
FLOUR, P bl.		
Unsound State,.....	4 00 @	4 50
Superfine State,.....	5 35 @	5 60
Extra State,.....	6 15 @	6 40
Superfine Western,.....	5 50 @	5 75
Fancy Ohio,.....	5 75 @	5 90
Extra Ohio,.....	6 50 @	6 75
Extra Ind. and Michigan,.....	6 30 @	7 50
Fancy Genesee,.....	6 30 @	6 50
Extra Genesee,.....	7 00 @	8 00
Extra Missouri,.....	7 00 @	8 75
Southern,.....	6 00 @	8 75
Rye Flour,.....	3 75 @	4 30
Corn Meal,.....	3 70 @	4 25
Buckweat, P 100 lbs.,.....	1 60 @	2 00

GRAIN, P bush.		
Prime white Canada,.....	1 63 @	1 65
Fair prime white Western,.....	1 50 "	1 55
Red winter Western,.....		1 40
Good and choice white Ky.,.....	1 75 "	1 80
Corn,.....	80 "	85
Barley,.....	75 "	85
Rye,.....	87 "	88
Oats,.....	53 "	62
Hops, P lb.,.....	14 "	18
HAY, P 100 lbs.,.....	60 "	70
MOLASSES, P gal.		
Cuba Muscovado,.....		23
New Orleans,.....	39 "	40
SUGAR, P lb.		
Cuba Muscovado,.....	7 "	7½
Loaf,.....	10½ "	10½
TOBACCO, P lb.		
Kentucky,.....	6½ "	8½
Seed Leaf,.....	6 "	20
Florida,.....	15 "	26
Havana,.....	30 "	50
SEEDS, P lb.		
Clover,.....		10½
Timothy, P bush,.....	2 12½ "	2 25
Flax Seed,.....		1 60
Calcutta Linseed,.....		1 65
TALLOW, P lb.		
Prime,.....		10½
Rough,.....	7 "	7½
PORK, P bl.		
New Mess,.....	17 75 "	18 00
Old ".....	17 25 "	17 50
Clear,.....		20 25
Prime Mess,.....	16 25 "	16 50
Prime,.....	13 25 "	13 50

NEW YORK CATTLE MARKETS.

Prices of Beef at Forty-Fourth Street.

	To-day.	Last week.
Premium quality,.....	11½ @ 12½	13 @ 13½
Best quality,.....	10 " 11	10½ " 11½
Medium quality,.....	8 " 9½	8½ " 10
Inferior,.....	6½ " 7½	7 " 8
General selling prices,.....	7½ " 10	7½ " 11
Average of all sales about	9 "	" 9½

REMARKS ON BEEF CATTLE.

The market is a shade lower for beef cattle, and the demand has only been moderate. Yesterday the sales were slow at a half cent decline. The rates this morning were a shade better, yet not up to the currency of last week. We quote premium at 11½ @ 12½; prime at 10 @ 11c; and common and ordinary at 3 6½ @ 9½c. Average price, 9c.

MILK COWS.

The trade is moderate at \$30 @ 60 as to quality, some few extra making as high as \$70.

VEAL CALVES.

Extra quality has sold at 7½ @ 7¾c; sales generally at 5 @ 7c; stocks ample.

SHEEP AND LAMBS.

The demand is active at advanced prices. We quote at 10 @ 13c P lb. Sales at \$3.50 @ 8.00 per head. The supply is light.

Sales by McCarthy of 774 head at an average of \$5.73 per head, and by McGraw & O'Brien, 1530 head for \$8,429.56.

ADVERTISEMENTS.

New Jersey Green Sand Marl,

Abounding in potash, phosphates, sulphates, and silicates, and eminently adapted for the restoration of worn out and exhausted soils, is the cheapest and best manure offered for Winter Grain and Grass lands, or for Fruit Trees, Grape Vines, &c. Each bushel of the Marl contains more potash than the same quantity of the best unbleached wood ashes. Price SEVEN CENTS PER BUSHEL, delivered on board vessel at the Company's wharf, on Sandy Hook Bay, N. J.

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GEO. W. ATWOOD, *Secretary*,
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The summer term, of 20 weeks, commences on Wednesday, May 4. Circulars may be obtained of the Editor of the FARMERS' MAGAZINE, No. 42 ANN ST., N. Y., or of the Principal, at Amherst, Mass.

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A pocket Manual of Cattle, Horse, and Sheep Husbandry; with directions for the breeding and Management of swine, poultry, pigeons, rabbits, dogs, etc., the treatment of their diseases, and a chapter on bees.

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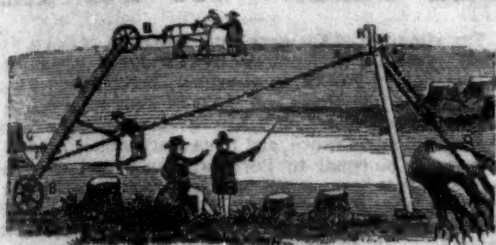
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Its weight (largest size) is 1500 lbs., and yet it can be boxed, with the exception of the wheels and lever, in a space of 10 feet long by 15 inches square. It is made of wrought iron, of a peculiar quality, capable of sustaining 57 tons to the inch.

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Orange, Mass., Sept. 20, 1858. oct 1f

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Card for 1859.

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A package of one dozen, \$2; three dozen, \$5;
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Descriptive circulars with directions for planting forwarded free.

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PEABODY'S NEW HAUTOY, 50 cents per dozen, \$3 per 50,
\$5 per 100.

THE ALLEN RASPBERRY, \$1 per dozen, \$6 per 100, \$50
per 1000.

We invite attention to this new Raspberry by persons living in situations where the Hudson River Antwerp does not flourish, and by all who wish for a variety of superior flavor, and which requires no staking in summer nor covering in winter.

These Plants have all been obtained from their original sources, and are warranted genuine and unmixed.

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H. & J. CARPENTER.

Poughkeepsie, N. Y., Mar 21, 1859.

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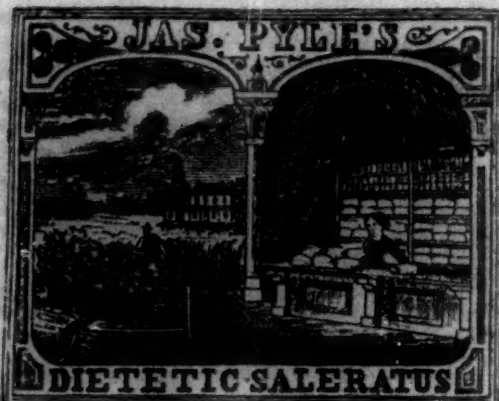
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This SALERATUS should be found in the culinary department of every house in this land. Its unquestionable purity and excellence in producing GOOD BREAD must bring it into general use. The wide-spread reputation it has already gained is the result of real merit, and shows the ability of American people to discriminate in favor of a wholesome article.

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How much longer, good mother, is this state of things to last? Ask for

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